architecture/construction symposia

june, 1967

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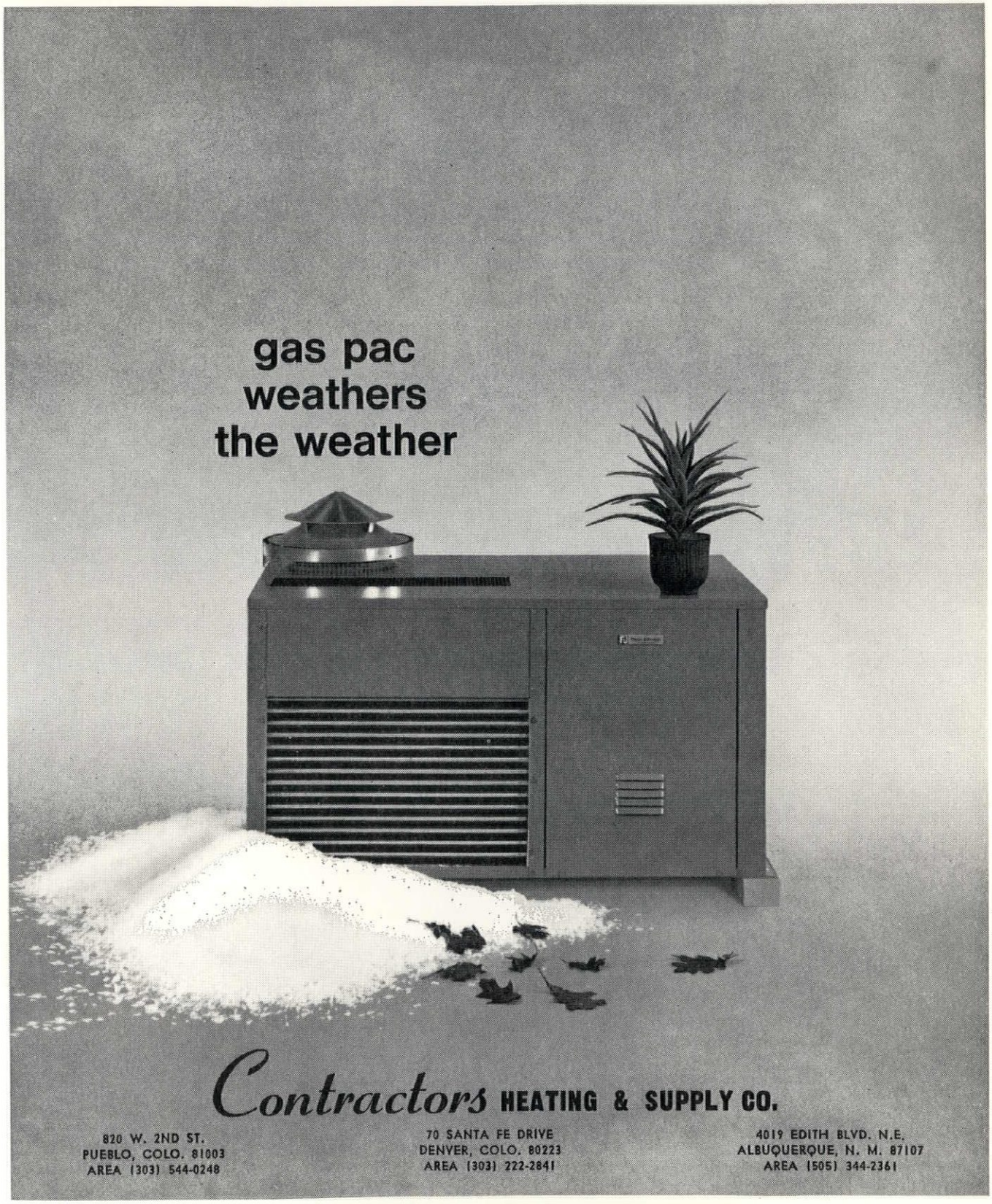

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Consulting Engineers Host International Meeting...

For the first time since the United States Consulting Engineers joined the International Federation in 1958—Americans played host to the group in Washington, D. C., May 8-13, 1967. The Federation Internationale des Ingenieurs Conseils number seventeen countries . . . including: South Africa, Australia, Iceland, Canada, the U.S.A., and twelve European nations.

Eugene Waggoner, Denver, Colorado, climaxed his year's term as National CEC/USA president when he received the President's "E Certificate" for Export Service on behalf of the Engineering Association for activities in which his own home chapter (Colorado), played a large role. The E Award was presented for the organization's efforts in stimulating overseas engineering work through trade missions, an International Directory, and for the Institute for International Engineering held every two years at the University of Colorado. (See: Symposia/October). Mr. Waggoner is a partner in the firm of Woodward-Clyde-Sherard and Associates — and has announced that his firm has established a $10,300 scholarship to be given each two years to a graduate student in Engineering Geology. Scholarships will be administered by the CEC/USA Executive Board.

Among major actions of the CEC/USA convention, where Ken R. Wright, principal of Wright-McLaughlin Engineers of Denver, serves as a national director, was the establishment of a by-law change providing policing and disciplinary actions for ethical violations, and the acceptance in principle of a revised code of ethics.

The delegates also approved a resolution to seek the incorporation into state laws and regulations ethical enforcement procedures including prohibition against competitive bidding for professional services.

Five international achievements in engineering have been selected for the grand awards in the 1967 Engineering Excellence competition of Consulting Engineers Council of the United States (CEC/USA). The achievements, all designed by U. S. engineers in private practice, in the order of Engineering Achievement, Consulting Engineering Design Firm and Type of Achievement, are:

Jengka Triangle Project, Kuala, Lumpur, Malaysia; Tippetts - Abbett - McCarthy Stratton, New York, N. Y.; comprehensive area development.

Kittikachorn Stadium Bangkok, Bangkok, Thailand; Louis Berger, Inc., East Orange, New Jersey; structural and architectural engineering.

Lake Tahoe Water Reclamation Project, Bijou, Calif.; Cornell, Howland, Hayes, and Merryfield, Corvallis, Ore.; sanitary engineering.

Merced River Development Project, New Exchequer Dam, Snelling, Calif.; Tudor Engineering Co., San Francisco, Calif.; civil engineering.

Rochester Methodist Hospital, Rochester, Minn.; Ellerbe Architects, Inc., St. Paul, Minn.; mechanical systems engineering.

In the Symposia Area . . . three projects have been given a Superior Rating—and all are to be presented in Symposia under our heading . . . "Symposia — Engineering Concept Studies."

architecture/construction

symposia

serving the construction public in Colorado, Wyoming, New Mexico, Utah, Arizona, Nevada

VOLUME 2 NUMBER 1 JUNE, 1967

THIS MONTH

A publication of Boyce Publications, Inc. Issued monthly.
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the last word:

Jim Blackinton (Blackinton and Decker, General Contractors) will leave Denver on June 1 to take on a totally new job. Jim will spend the summer at Princeton University taking language and orientation courses . . . and with his wife and daughter . . . leaves September 1st to take over an assignment with the United Church of Christ as Business Manager for the American Institute for Girls in Ismir, Turkey. Jim has been very active in the Associated Building Contractors, serving as Chairman of this year's Building Industry Conference Committee. Our best wishes go with Jim and his family on their new assignment. A great guy . . . Denver will certainly miss him!

Scheduled for mid-July, the Wyoming American Institute of Architects Convention in Worland, Wyoming. More information on this . . . as it becomes available.

In early May, John E. O'Fallon, Director of Denver's Building Department, addressed a joint meeting of the Building Officials Conference of America and the South Eastern Michigan Metropolitan Development Agencies in Port Huron, Michigan. Mr. O'Fallon's subject: "Developing a Regional Building Code: A Case Study of the Denver Metropolitan Experience."

Salt Lake City's Producers' Council Chapter is planning ahead! Satellite Programs have been scheduled in Great Falls, Montana on September 12, and in Billings on September 14th. Denver P.C. Members who wish to participate in these meetings should contact Evan Williams (222-1751) as soon as possible.

It was "Bon Voyage" to Jean and Don Wakefield last month as they left Denver for the A.I.A. Convention in New York City . . . (May 14-18). Colorado's representatives of the Structural Clay Products Institute have a marvelous European trip planned to cover construction in Rome, Venice, Switzerland, Austria, England, etc. They will all be given complete Symposia coverage, thanks to Jean and Don who will be studying new and interesting European building techniques for a Symposia report! They will return to the Mile High City on June 7th. We hate to say this . . . but the grapes are getting sourer all the time!

Jay Lower, Assistant Managing Director of the Colorado Contractors Association has recently completed a number of Educational courses. He has finished the AGC Safety Training Correspondence Course for Construction Supervisors, and spent May 14-19, in Washington, D.C., attending the James D. Marshall Training Program for Associated General Contractor Executives.

Formal opening ceremonies were held at 8:00 p.m. on the evening of May 8 at 221 Santa Fe Drive in Denver . . . new home of the Mountain States Bureau for Lathing and Plastering. John Anderson, President of the Colorado Chapter/American Institute of Architects was the speaker. Symposia congratulations to the Bureau and Executive Director, Keith Bell! The spacious new quarters will provide many added services for the architecture/construction community!

Alan Fisher, A.I.A., who has contributed so significantly to Symposia during its first year of publication, announces his withdrawal from the firm of Fisher and Davis. Mr. Fisher in conjunction with the two senior associates in his former firm--John D. Reece and Hilary M. Johnson--have formed a new partnership for the practice of architecture at 825 East Speer Boulevard in Denver. Their symbol--Garrison's "architect," of course.

Robert McConnell, Assistant Professor of Architecture at Arizona State University and an active and well-liked member of the Central Arizona Chapter/AIA goes to the University of Kansas in the Fall as a full Professor! He will certainly be missed by his many friends and colleagues in Phoenix.

Polly Culpepper (Ceco Steel) has been named by her fellow WICS (Women in Construction) as the Coordinator for the WIC Regional Forum to be held in Denver, April 26-27, 1968.

Consulting Engineers Council/Colorado has named David G. Messerschmitt of Denver as the outstanding senior in the School of Engineering at the University of Colorado. A graduate of Thomas Jefferson High School, David has attended C.U. as a recipient of a National Science Foundation Scholarship . . . and has received many honors in his undergraduate years.

Skyline/Denver featured in last month's Symposia was given an overwhelming YES when Denver's voters went to the polls on May 16th. A gratifying first step in the right direction--the problems of implementation begin now--let us hope we can meet this challenge as well as we did the initial one.

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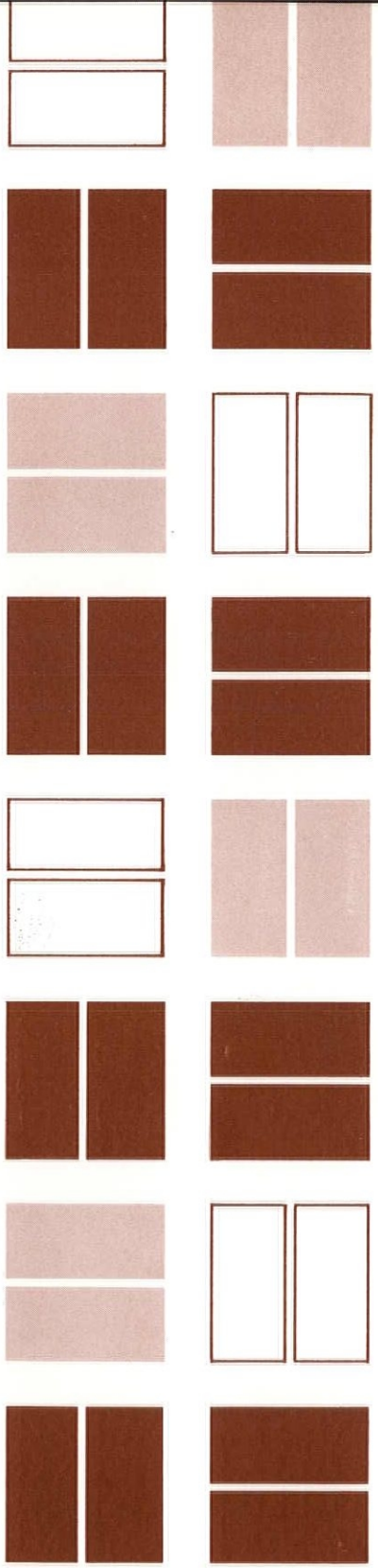

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INSTALLATION

1. **Mortarless on Earth**
   Brick can be laid on compacted earth, using 1″ bed of sand for leveling. Lay tig together and sweep extra fine sand on top to fill joints. No special skills require
2. **Mortarless on Concrete, Plywood, or Other Flooring**
   If base is fairly level, use two layers #15 felt, celotex, or other insulating pad. Bri will thus level easily and floor will be insulated. Sweep in fine sand.
3. **With Mortar (Wet)**
   Lay on a concrete slab. Bed in ½″ of mortar, 1 part cement 2 parts sand. **Ke clean. Don't let mortar scum dry on brick faces.** Grout with same mix. Finish join with 1″ diameter jointer.
4. **With Mortar (Dry-set cement)**
   For application over: wood or steel construction, concrete slab.
   A. Setting bed mix is 1 cement, 5 sand 1/10 hydrated lime. Add enough water for **stiff** mix. Place ¾″ min. 1¼″ max. thickness of setting bed. Brush on thin lay (1/32″) of neat Portland cement paste over the bed. Beat the brick into comple and intimate contact with plastic mortar.
   B. **Pointing and Grouting:**
   Use **stiff** mix, 1 part cement, 2 parts sand. Tool or compress pointing mortar in joints to firmly bond it to the setting bed and to the brick. Point joints the sam day that brick is set.
5. **With Chemical Resistant Mortars.**
   Several manufacturers make cements specifically designed for this purpose. Typ vary with service conditions. Robco will gladly supply names of acid-proof ceme manufacturers.

CLEANING

Protect floor and let dry 7-10 days before acid cleaning. Wet floor **thoroughly** befo applying acid. Use only best grade **White** muriatic acid, 1 part acid, 9 parts water. U stiff fiber brush—scrub thoroughly to remove **all** traces of mortar stain. Scrub sma areas, 100 sq. ft. maximum. Rinse **promptly** with clear water. **Do not** allow acid to d on floor. Sawdust is useful in absorbing excess acid-water mix from floor.

For that extra critical job, lay brick but do not grout. Wait 24 hrs. and apply melte paraffin to brick surface with a paint roller. Grout and then use portable steam clean to remove all traces of wax.

MAINTENANCE

Sealing and waxing will help your floor maintain its new appearance. We recommer **Hillyard #341 Sealer, cut with 50% water,** applied with a string mop. Apply thin coat leave no excess. This coating is slip and soil resistant. Inspect the floor—this may be a the gloss you desire. If a waxed surface is desired, use **Liquid Trewax,** applied accordi to manufacturer's directions. Allow sealer to dry at least 24 hours before applying wa

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WYOMING A.I.A. SPRING MEETING

by Gerald Deines, A.I.A.
Editorial Board

A most successful Spring meeting of the Wyoming Chapter of the American Institute of Architects was held April 28-29 in conjunction with the University of Wyoming at Laramie. This was the first time the Wyoming Chapter has met with the architectural students at Wyoming University and it was a most gratifying experience.

A No-Host Cocktail Party on Friday evening provided the initial get-together for members and their wives. The A.I.A. business meeting was held at 9 a.m. on Saturday, April 29th, followed by a Casual Break with a Residential Slide Presentation. Luncheon was held at the Washakie Center.

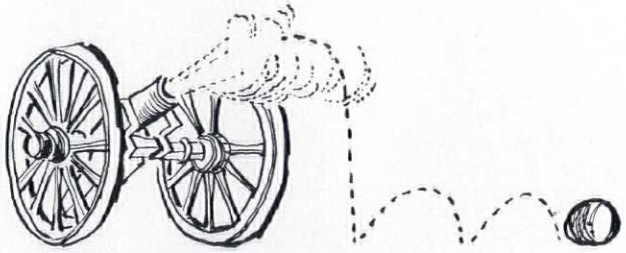
In the afternoon a Student Critique by the Critique Committee with audience participation was held in the Union Ballroom. The Wyoming University students had a display of their work, and the architects brought some of their work to put on display. Some of the students placed their work on the "chopping block" for the architects to critique. The work was of good quality and the critique was excellent.

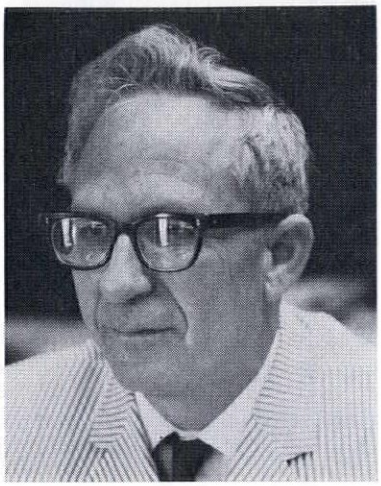
While the architects were thus engaged, the architects' ladies enjoyed a style show, a luncheon, a tour of the University of Wyoming and a social hour at the home of Mr. and Mrs. Peter Hanson.

The cocktail party in the evening was sponsored by the Producers' Council, followed by an informal buffet dinner. The speaker for the evening was to have been Mr. Eugene Sternberg, A.I.A., of Denver, former instructor at the University of Cambridge, London University and the University of Denver. Unfortunately, Mr. Sternberg was ill and unable to attend. University of Wyoming psychology professor, Dr. Wilson Walthall, however, kindly took over the principal speaker's chores and acquitted himself splendidly.

This was the best attended meeting of the Wyoming A.I.A. to date; and we can only predict a greater measure of success and cooperation for the future.

a symposia salute





TO:
Max Flatow
Fellow of the
American Institute
Of Architects

It is with great pleasure that we fire our Symposia Salute to Max Flatow of Albuquerque, New Mexico on the occasion of his advancement to Fellowship in the American Institute of Architects. Mr. Flatow is the senior partner in the firm of Flatow-Moore-Bryan and Fairburn, Architects, in Albuquerque and holds architectural licenses in New Mexico, Texas, Colorado, Arizona and Idaho. Born in Port Arthur, Texas, his degree in Architectural Engineering is from the University of Texas at Austin.

From 1941-44, Mr. Flatow served in the United States Army, in charge of design, engineering and construction in the United States, the West Indies and South America. From 1945-47 he was in charge of design and administration for the Manhattan District in Los Alamos, New Mexico. In 1947, in partnership with Jason Moore, he established his architectural practice in Albuquerque where he has pioneered advancement of the profession with the first expressions of contemporary design, notably in the commercial and educational fields. His completed designs stress the use of materials indigenous to the area, the heritage of southwestern cultures, and a strong tie to long range master planning and the protected growth of the community. He has been the recipient of many awards in this field, and was named Architect of the Year in 1954 at the Third Annual Conference of the Mountain Region, A.I.A.

Max Flatow has been a member of the Institute for fourteen years with a splendid record of continuing service at local, state and national levels.

Symposia salutes Max Flatow, F.A.I.A. of Albuquerque, New Mexico—for leadership and notable contributions to the advancement of the architectural profession.

new title for an old song

DEPUTY TOUR DIRECTOR
Victor T. Edwards, Perth, Australia

TOUR DIRECTOR
Robert A. O'Neill, F.A.I.B., F.A.I.M., J.P., Adelaide, Australia.

AROUND THE WORLD IN 60 DAYS

At seven o'clock on the evening of May twentieth, thirty-two members of the Master Builders' Federation of Australia, Inc., left Sydney, Australia on a sixty-day Odyssey (give or take a few hours and the International Date Line) which would bring them in contact with members of the Construction Community around the world. Scheduled stops, with time for conferences with their complementary organizations, have been arranged in Honolulu, Hawaii; eight mainland U. S. cities (including Denver), London, Copenhagen, West Berlin, Paris, Rome, Teheran, Tokyo and Hong Kong.

The Master Builders' Federation of Australia, Inc. is the oldest national employers group in Australia, and the thirty-three touring members represent an annual turnover of $100,000,000.00 in building and construction throughout the "Down Under." The aim of the Study Group is to broaden their knowledge of changes in the Industry, and through this process maintain their own efficiency in specialized areas, enable them to more effectively carry on their existing business, and to help maintain their present operations and level of activity. The Australians feel their group will be able to obtain a detailed understanding of the latest methods, techniques and developments from their associated organizations in the countries visited. This exchange of views, they feel, will result in a broad understanding of overseas industry in the field of building and construction.

Heading the Tour is Robert A. O'Neill of Adelaide, Vice President of the Master Builders' Federation. Mr. O'Neill has many honors . . . F.A.I.B., F.A.I.M. and J.P. following his name, he has been active in the construction field for almost 50 years. Deputy Tour Director is Victor T. Edwards of Perth. He is a member of the Builders Registration Board for Western Australia, and has been active in the industry for forty years.

General Contractor members on the tour are: Michael Arbon, Victoria; Clyde Barclay, Queensland, Northern Territory and New Guinea; D. E. Butterworth, Melbourne; Gordon Card, Cairns; Kevin Chilman, New South Wales; Murray Crow, Victoria; Lindsay Edwards, Mt. Gambier District; Alec Gathercole, Victoria; Robert Greaves, Perth; Barry M. Griffiths, Riverina and Southern New South Wales; C. M. Hornibrook, Brisbane; James V. Larkey (Tour Secretary); Colin McCormack, New South Wales and Capitol Territory; Leonard V. O'Hara, Canberra; Albert S. Petch, Victoria; John A. S. Pidgeon, Brisbane; George Robinson, Perth; Don Sarah, Adelaide; David Taubert, Victoria; Reginald Want, Grafton, New South Wales; Errol A. Watkins, Brisbane; and Frank R. Woodcock, Melbourne. Home Builders in the Touring Group include: Arthur A. Cooper, Sydney; Frank E. Cogan, Sydney; Robert Franzon, South Australia; Allan Godfrey, Melbourne; R. G. Kern, Queensland; D. N. King, South Australia; Clifford R. McEwan, Perth; and Leonard Sullivan of Brisbane.

Denver members of the Metropolitan Denver Home Builders Association and the Associated Building Contractors of Colorado (AGC) Inc. greeted the arriving Australians at Stapleton International Airport on the evening of May 28th.

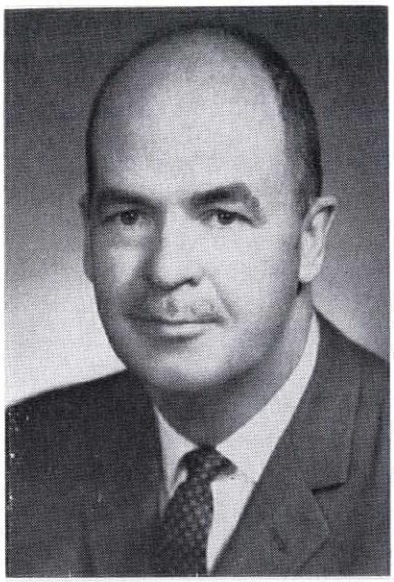
First of the scheduled events for the visiting delegation was a trip to the Air Force Academy on May 29th. Colonel John Ainsley of the Academy prepared a briefing of construction at the Academy which was followed by a Luncheon at the Officers' Club. After a tour of inspection of the A.F.A., buses toured construction projects in the Colorado Springs area. This was climaxed by a gala Dinner hosted by Pueblo, Colorado Springs and Denver Chapter members.

Memorial Day (May 30) was designated as a Free Day for the Australians, and provided opportunity for person-to-person exchange with the participating local organizations.

Breakfast at the Brown was the first order of business on May 31—when all participants gathered for a group meeting at Denver's historic Brown Palace. During this day, small groups toured Denver offices and construction sites . . . with a final farewell at the Airport at 6:00 p.m.

A Symposia Deadline precludes coverage of this significant event until our July issue, but we are anticipating, with our cooperating organizations an interesting—and perhaps helpful—exchange of views in this feature. Australia is new—booming—and certainly "on the ball." They are coming to learn, but perhaps we can find a fruitful exchange of ideas with the men from "Down Under."

elevation



Fletcher B. Trunk, President
Boyce Publications, Inc.
Publishers of Symposia

A birthday is not just a time for looking forward to new hopes of achievement; it is also a time for looking back —to an evaluation of what has gone before. With this June issue of Symposia—we're a year old, and Janus-faced, we are smiling in both directions.

Symposia has been most fortunate in its first year of life to have had so many well-wishing godparents. These organizations in the architecture/construction community, their leaders and members have stood by with the know-how of a Construction Industry "Dr. Spock." Thanks be to them for Symposia's phenomenal growth—reaching now into a six-state region and covering more industry areas in greater depth and greater understanding. It has brought to Symposia's publisher the Building Industry Conference "Man of the Year" award, membership in the Construction Specifications Institute and designation by the Western Mountain Region of the American Institute of Architects as the official publication for the November, 1967, Regional Conference in Colorado Springs.

A new year lies ahead. We can only reiterate to you—the architecture/construction community of the Western Mountain Region—the initial promise made in June, a year ago. Symposia is designed to serve as a forum—a means of communication between all segments of the industry, all parts of our region, and the Construction Public.

Working together has been a gratifying and heart-warming experience for us, and "thank you" seems quite inadequate! We shall perhaps express it best in twelve future issues dedicated to our common purpose . . . a vigorous and growing Industry striving together for unity and understanding.

symposia

architectural concept study IV

library
college of santa fe
santa fe, new mexico

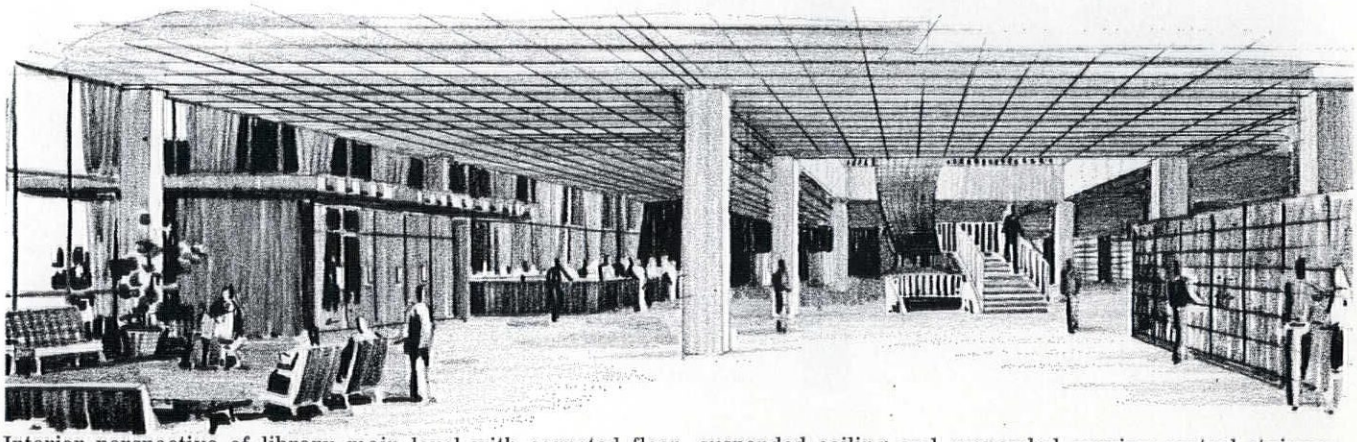
(The College of Santa Fe proposed Library facility presents a unique and exceptionally interesting subject for the June Architectural Concept Study. This is the fourth in this series, and we feel Symposia readers will enjoy this preview not only of the proposed Library, but Architect Philippe Register's master plan for the campus of this comparatively new institution of higher learning. Notes and plans are from Mr. Register, A.I.A., Santa Fe, and renderings are by Foster Hyatt, A.I.A., Santa Fe.)

by Philippe Register, A.I.A.

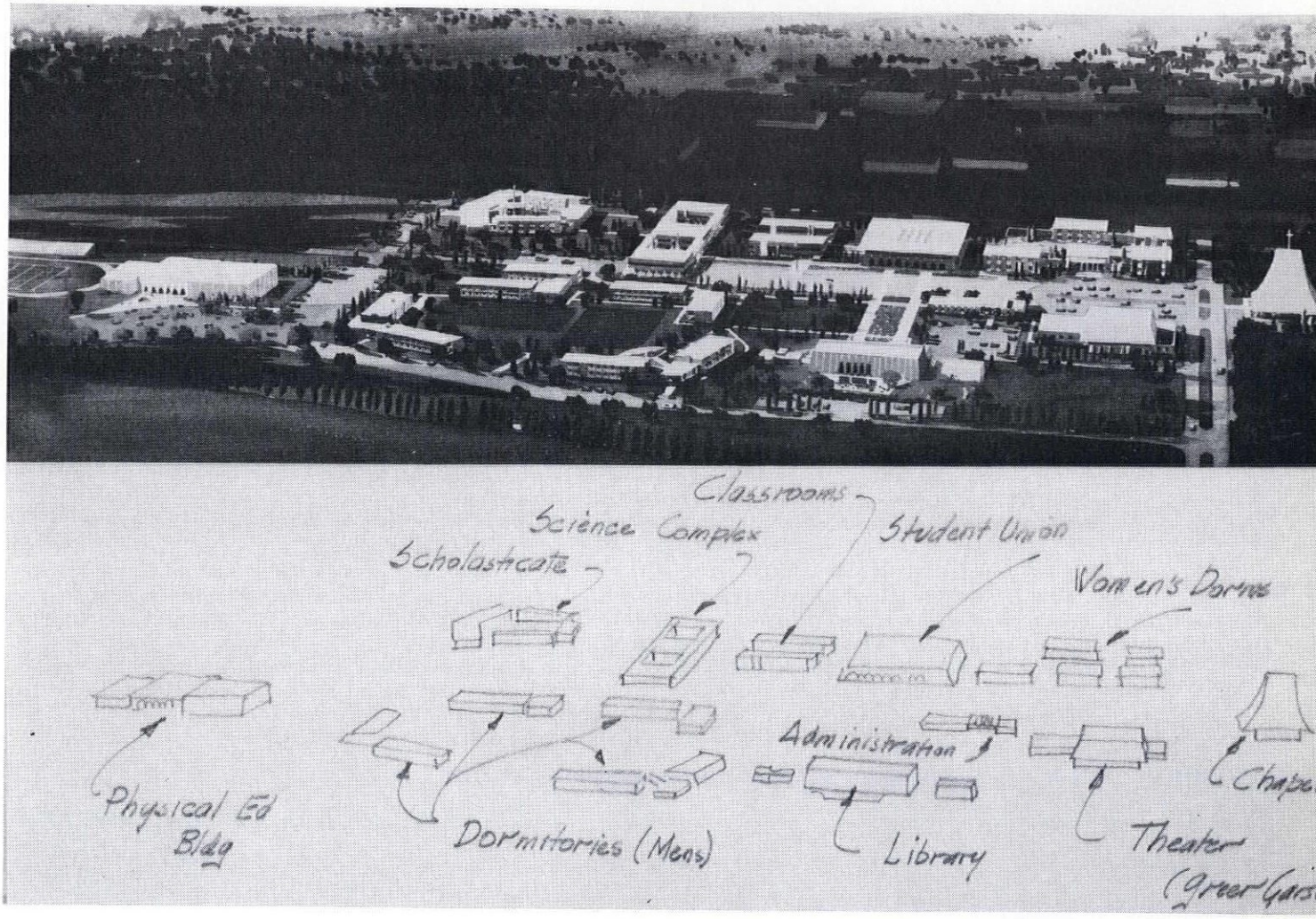
Fortunately, the College of Santa Fe is a relatively young institution (20 years) and had its beginnings in the existing buildings of the Bruns General Hospital, a World War II installation designed by the Corps of Engineers and made up of so-called temporary barracks. Most of these barracks are still standing and being fully used. Fortunately, however, the College is on a 96-acre piece of ground, and there was sufficient ground to plan a campus which would eventually call for demolition of the barracks buildings, but which could leave them standing and in use as long as possible. The other advantage of a small College (which this is by national standards) is that one could master plan the entire project based on an anticipated number of students.

Overall Campus Concept

With these two premises, it seemed logical to plan the campus in what I call the concept of "rings." This is anything but original, having been done in varying degrees of success in many places, more specifically the University of Mexico in Mexico City. This concept entertains the idea that there is a core, in this case a pedestrian mall, the size of which is determined by how many buildings will be placed around it. In the case of the College of Santa Fe, the core is about 150 feet wide and 700 feet long. No vehicles other than service type will be able to use the core area. It will be paved and landscaped in such a way that people can criss cross directly to their destination. There will be buildings around this core but they will not be buildings designed in the conventional sense of the word because they will have to have two types of front entrances. One will be the pedestrian entrance from the core or mall, and the other will be the vehicular entrance as it faces a loop drive which forms the second ring, the buildings being the first ring around the core. The campus master plan is essentially completed by a third ring which is another series of buildings around the loop road. These



Interior perspective of library main level with carpeted floor, suspended ceiling and suspended curving central stairway.



buildings are naturally somewhat secondary in nature in terms of campus activity, and there will be such things as faculty residences, the physical education facility, which has to be in the vicinity of the athletic fields (lockers, dressing, etc.) maintenance structures and the like. With this concept for the master plan it is not difficult to plan for the location of future buildings. Parking is afforded by having parking lots as cul-de-sac off the loop drive. Service to all buildings is also off the loop drive, with reinforced sidewalks to get to boiler rooms and other areas not served by roads. If you can call the above description a philosophy, so much the better. Actually in my mind it is more a plan of organization which hopefully will prevent an aura of confusion which can result in trying to place several dozen structures with some degree of organization.

Proposed Library

With the above master plan in mind it is not difficult to visualize the location and plan of the library building itself. I will discuss the plan of the library, then go on to why it looks like it does. Due to its importance as a learning center it is fairly well centered on the mall, as opposed to being at one end. It is as close as possible to the dormitories, and yet close to the academic facilities. It is on the highest ground of the campus so that it dominates the other buildings. The main pedestrian entrance is facing the core, and the walkway to this entrance is very wide. The service drive to this building is off of one of the parking cul-de-sacs from the loop drive. The reason for this is that provision has to be made for expansion of the Library building, and the only way to expand is toward the loop road. If the service drive was directly off the loop road, a future building expansion would cut off service.

The building is planned for flexibility. In the research which has been done prior to planning this building, it became apparent that all libraries are different and their programs are changing to meet the demands of the times. By flexibility I mean making provision for rearrangement of floor plan insofar as possible. Such things as rest rooms, elevators, stairs and some offices are permanent, but it should be possible to rearrange the rest of the space. The following therefore occurs in this library. All floors are designed to carry stack loading of books. Columns are spaced as far apart as practicable, taking into consideration loading limitations. All ceilings are suspended in an acoustical two foot by four foot grid which permits rearrangement of lights. All floors have concealed wireways so that power and communication lines can be moved easily. The space above the suspended ceiling acts as part of the heating and air conditioning system and the acoustical tiles are of the type which lets the air filter through, so that moving partitions will not result in major mechanical remodeling.

The above are the unusual features of the library plan. In other respects it contains most of the elements to be found in current college library thinking. This is particularly true in the liberal quantity of study carrels. These of course can be automated. There are some group study rooms, sealed off for sound. An attempt has also been made to make the library easy to supervise with a limited staff. For example, on the lower level there is one office which has glass on three sides, thus permitting one man to oversee the service entrance, the stack area and the microfilm reading room.

Sun, Silence and Adobe

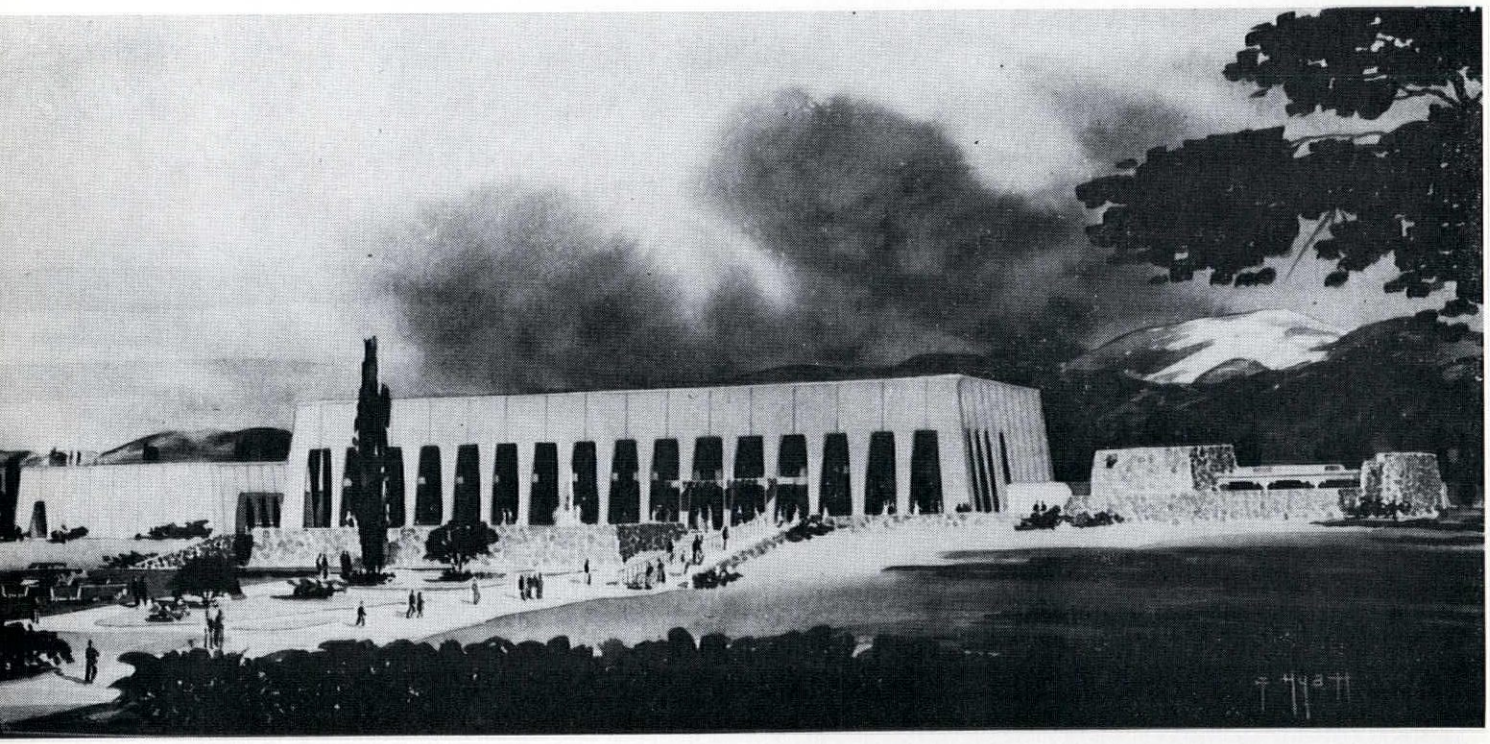
Now to explain the design of the Library. Yes—New Mexico is characterized by sun, silence and adobe, and sometimes I wish we were back in the days before the Southwest was "discovered." But now we have a real challenge architecturally speaking. We still have the sun. We sometimes have the silence but we can't afford to build out of adobe, except for smaller and usually residential structures. Stucco tends to crack and since it is a cement product instead of a mud product, the cost of fixing it are enormous and not always permanent. The College of Santa Fe cannot afford this kind of maintenance. Yet it is imperative to soften the lines of this building to make it "fit." New Mexico is full of natural mesas which drop off suddenly and form the character of the landscape. The angle of the drop offs is often in the form of a tilted plane. As can be seen from the rendering of this building, the exterior walls are tilted in, thus making what I call "Mesa" architecture. The way this is done is not expensive, yet it is very permanent being constructed of 7000 psi reinforced concrete. Pre-cast concrete tees are poured with curved sides to form the arches and tilted into place. They are then painted an appropriate brown color with special paint which can withstand the New Mexico sun without fading. Naturally this facing gives the building its character because it stretches all the way around the four sides. It is also my philosophy that the simpler the building in structural concept the better. Thus it is a simple functional rectangle. I might add for what it is worth since you asked me to express my own views with regard to this project, that I do not necessarily believe that "Form Follows Function." Most functions in my opinion can fit in a structurally clean form. This is the case here.

Our research indicated that we needed some 45,000 square feet of space to house the books and provide for all the functions. So we created 45,000 square feet then went about refining the interior spaces. This may sound like heresy to some but it works just fine.

The two buildings which appear on either side of the main library building are different in function, and possibly might be built at a later date. For this reason and the possibility that they could be donated as entities in themselves, they are separate. The Southwest collection is a very obvious reminder of the adobe style of buildings found in New Mexico, but rather than use stucco which I have previously mentioned as being undesirable, we have chosen local granite laid in a random pattern. This choice was made because it is characteristic of much of the early New Mexico buildings, and furthermore we have used a great deal of it on the campus for retaining walls. This building will hold the books in this special collection devoted to the history of this region and the southwest in general.

The other building called the Forum is really a small auditorium. It has the same basic design concept as the Library, but is smaller and of a different color so as not to conflict.

Regarding the status of working drawings and specifications, we are holding off on these till the financing has progressed further. I would say the project will be under construction by this time 1968.



Completed design of the Library Complex for the College of Santa Fe, to be built early in 1968. The concrete and native stone structure is a contemporary complement to the ancient Indian/Spanish architectural tradition of the area, and includes a 4,100 sq. ft. Forum Building to serve as a lecture and debate center for the campus and the community, a main three-level Library Building with 53,000 sq. ft. stack space for 250,000 volumes, lounges, offices and related services, and a Southwest Collection Annex designed to house reference material and memorabilia of the Southwest.

At a total project cost of $1.35 million, the new Library project is the latest and largest in the College of Santa Fe's burgeoning Master Plan Program under the design direction of Architect Philippe Register, AIA.

Organizations Brain Storm Problems

On April 12, Denver's Producers' Council hosted a joint meeting with the Denver Chapter of the Construction Specifications Institute. Principal speakers and their topics were: Walter L. Meyer, President of the Meyer Construction Company, a Past President of the Associated Building Contractors of Colorado and presently a Visiting Lecturer at the University of Colorado. His topic was "How Far Should Specifiers Go in Recognizing the Problems of the Sub-Contractor?" "What Degree of Responsibility Should Be Placed on Manufacturers for Guarantees of Product Literature" was the subject treated by Oluf Nielson, AIA-CSI, a member of the firm of McGuire, Boker, Nash and Nielsen, Architects.

Moderator for the meeting was Mr. Donald Wakefield of the Structural Clay Products Institute, and after the topics were delineated by the speakers, they were then discussed in round-table fashion by the over one hundred Producer Council and Construction Specification Institute members present. Summations were presented at the conclusion of the meeting.

Both topics of this joint effort are of great importance and general interest to all members of the architecture/construction community, and Symposia has felt coverage, in depth, would have far greater meaning than immediate reporting without adequate space for a full report.

TOPIC: How Far Should Specifiers Go in Recognizing the Problems of the Sub-Contractor?

SPEAKER: Walter J. Meyer.

Before proceeding with my particular remarks on the subject, however, I would like to make some general observations with respect to the construction industry as a whole:

> We are part of the largest single industry in the country. This year we will approach a GNP of near $800 billion in the U.S. and we, the construction industry, will produce approximately $100 billion, or between 12 and 13 percent, of this estimated Gross National Product. Government spending in programs such as Urban Renewal, Model Cities, Highways and Highway Beautification, Air and Water Pollution, Mass Transportation and so on in the coming years will run into billions of dollars, and this spending together with the increased growth in the private sector's maintenance and new construction certainly points to a great future for our industry.

All this is fine but what about the serious problems we have in the industry? Can we face such a challenge successfully with them? I hope all of you will accept candor in this discussion of some of the difficult areas and the disputes that confront us today. We, as participants in this great industry, continue to pay a heavy price for not getting down to cases and solving our problems, and I for one hope we will, in a voluntary and cooperative atmosphere, get together as our interests suggest we must and work out solutions to these problems. When we talk of "profitless prosperity" in the country today, I am sure it is our industry, or at least parts of it, that is the prime contributor to it. If I may stray for a moment and step outside the boundaries of our topic to cite a specific case, let me say we should not worry tonight as to who is holding who, harmless or otherwise, but rather remind ourselves how an important industry can fail in its responsibilities, and in my opinion we are coming very close to doing just that in many respects today. It is regrettable that this "hold harmless clause" issue has gone as far as it has without being resolved by those in the family, the building team—but this is only one in many. I repeat that this point of resolving issues between the members of the building team is vital to the health and progress of the entire construction industry. *(See this issue of Symposia for further discussion of this topic under H.B. 1397.)*

It is the building team as a whole—Architect, Engineer, Contractor and Subcontractor — that must be concerned with its obligations to our customer, the Owner. As individual members of the building team, we should avoid taking unilateral action with respect to any matter that adversely affects others in the team and therefore upsets the efficiency and effectiveness of the team to perform in the Owner's interest and for the overall benefit to the industry. If such practices continue, we will further emasculate our industry image and we will be judged accordingly. When we cease to be acting in the public interest and responsibly to our Owners, we must face the alternatives which conceivably are more control by government authorities, federal and local, on the public work, and perhaps even generally; and disillusioned Owners making increased use of the "package deal" method for their building needs in the private sector.

Over the years we have discussed many times many of our problems, and I must admit that most of them, including serious ones, are still with us even with the remedial measures taken. But **we,** and I emphasize the **we,** must never stop trying to solve them for invariably they do not go away and we find "outsiders" then stepping in and imposing alternatives that none of us like. We see today where restrictive legislation is being passed; more trade associations are being formed and existing ones are becoming stronger; policing devices, such as bid depositories, are imposed on our bidding processes and the competitive bid system itself is suspect to cite a few of the "alternatives" that result.

But let's get back to our subject for discussion tonight—"How Far Should Specifiers Go in Recognizing the Problems of the Subcontractor?"

The subject question itself causes one to ask two additional questions—Who are the specifiers?—and, what are the problems of the subcontractor? The editorial written in the January, 1966, issue of the magazine, **Building Construction,** deals directly with this first point, as to "who are the specifiers," and reads as follows (and I quote):

"There are valid reasons why architects and engineers think that they share in the responsibility for product purchases:

- They write the specifications.
- They supervise or 'observe' construction on behalf of their clients to insure adherence to the drawings and specifications.
- They generally approve all change orders.

And, there are certainly valid reasons why contractors—both generals and subs—think that they share in the responsibility for specifications:

- They are charged with the responsibility of carrying out the intent of

the specifications within the market conditions that exist at the time the job goes ahead.

- They initiate changes in the specifications when they have had a bad experience with a product, when they have had delivery problems with a manufacturer, and when they have found that a manufacturer will not stand behind his product.
- They are the ones who guarantee a project to the owner.

Thus, the moral and legal responsibilities jointly assumed by members of the building team are almost unprecedented in the American business scene. This being so, it is not strange at all that the people involved in building tend to feel some responsibility for each other's work."

We historically think of the Architect and Engineer as the specifier but, in my view, our industry is changing so rapidly, because of conditions imposed on us by organized labor and an expanding technological environment in particular, that today each member of the building team, and even the Owner and others, contributes to making the choices of what goes into our buildings. I believe the increasing use of "Value Engineering," especially in public building by our government agencies, is clear evidence of the new direction in this area and supports what I consider to be a changing industry with changing roles for all members of the building team.

Today every one of us is called upon to know more about the materials, components and systems of construction that go into our buildings but also about business, government, human needs and wants, politics, social behavior and we could go on and on—What I am saying is we are living in a very complex world and we, as individuals, can no longer spread ourselves over as wide a span (wear as many hats), as we have in the past, in the more numerous areas of our many interests and activities. So what do we do . . .

The Architect hires experts to help him—structural, mechanical and electrical engineers, and there are others—these are his specialty sub-contractors. He becomes a manager of all the aspects of the creation and design of a building. Is this correct?

The Contractor does the same thing for his area of responsibilities and his experts are subcontractors in the actual construction of the building.

We can also say that many of the subcontractors to the general contractor employ experts too, and as subcontractors to them.

So we are managers—all of us that comprise the building team—with our individual jobs to do and the authority and responsibilities that go with them. But now let us define the "problems of the subcontractor" staying within the "specifier of products" perimeter when we do it. I would like to go back to the editorial where it stated "They are charged . . . to the Owner."

It is for these reasons that the "value engineering" concept is increasingly being used (called "cost reduction incentive" by one government agency).

A generation ago a Contractor employed directly, on his own payroll, most of the labor force needed to construct a building. He subbed perhaps 20-30 percent of the work. Today it is the reverse for he subs approximately 70-80 percent of it (why?). So he is a manager—he has to be one now to survive. When he subs practically all the work, he has been referred to as a "broker" and, more often than not, in a derogatory way. In my opinion if he is a good broker—has engaged the best subcontractors and does a good job of managing—we have possibly the ideal way to build, for it can conceivably result in the lowest costs and the best workmanship and work completed in the least time for the Owner, our customer.

But what are the problems of the subcontractor with respect to specified materials, and in the area of substitutions and changes? Let's go back to the editorial and the "value engineering" concept again for our answers. If a contractor's sub, who must face the market problems and guarantee his work, knows of a better product or a better way to perform a part of the work at less cost he should submit a proposal to the Contractor who reviews it and, after adding a reasonable markup, transmits it to the Architect for review and approval or disapproval as a change order. If the Subcontractor is one that is directly under the Owner he should transmit such a proposal directly to the Architect. It is as simple as that and not it all in affront to the prerogatives of the Architect. It is generally a matter of judgment whether such proposals should be considered favorably or not and it is the test of an Architect to, without a personal bias, objectively judge it. But again the Owner's interest should be the only yardstick.

Our time is going and we have only scratched the surface in this matter. I'm sure I've provoked some questions and you should have the opportunity for rebuttal.

Salient points on the subject were offered by the Round Table Discussion groups. In summary:

1. Items should have purchasing price exposed to all bidders, i.e., electronic clock systems.
2. Recognition of need for pre-opening of mechanical and electrical bids.
3. Specifiers should recognize subcontractor's problems prior to bidding—not after.
4. There should be a pre-qualified Sub-Contractor's list at the time of bidding to increase quality and responsibility.
5. Pre-qualification of contractors important when job involves over $10,000.00.
6. Specifier should write clear-cut "specs" on both materials and application.
7. Sub-contractors should not be permitted to go direct to owners.
8. Comment: 99 percent of "specs" written for General Contractors.
9. Biggest sub-contractor problem not covered by specifications . . . lack of proper coordination and execution of work. Lack of managerial training required.
10. Specify and obtain quality control of installation or application by representative of manufacturer.
11. Architect or specifier could assist the sub-contractor in the best way by starting with a complete and accurate specification and then enforcing its integrity.

TOPIC: What Degree of Responsibility Should Be Placed on Manufacturers for Guarantees of Their Product Literature?

SPEAKER: Oluf N. Nielsen, A.I.A.

Two recent "Batter Boards and Barriers" articles published by the American Institute of Architects Committee on Professional Insurance, discussed instances where Architects were held liable for the inadequacy of products which they had either specified or allowed to be substituted after being assured by manufacturer's literature that the materials were equal to the required task. In one case a judgment of $20,000 was approved against the architect because "the Supreme Court

pointed out that the architects (1) made no previous tests of the insulation material, (2) did not know of any specific cases where it had been satisfactorily used for similar buildings, and (3) should have been fully aware that unless the design and construction were such as to create and maintain a hermetically sealed envelope about the insulation material, moisture would infiltrate causing it to lose its insulation efficiency. Therefore, there was sufficient basis for the court to conclude that negligence existed."

"The court stated that while an architect is not an absolute insurer of perfect plans, he is called upon to prepare plans and specifications which will give the structure so designed reasonable fitness for its intended use, and he impliedly warrants their sufficiency for that purpose."

"MORAL—If substitute materials are specified, reliance upon a manufacturer's advertising is not sufficient. The architect must assure himself by other means that these materials are adequate for the purpose intended."

(No suggestion is made as to what "other means" should be employed.)

In the other case, a substitute for copper radiant piping was approved, with the manufacturer's assurance that it was equivalent to copper and with the engineer's approval. The piping material expanded excessively and the entire system including ceiling had to be replaced.

"The court said that the architect should not have relied completely on the manufacturer's representation and held that he was negligent in failing to secure independent tests of the suitability of the substitute material to see if it could be used safely in the same manner as copper and without any redesigning."

"MORAL — The representations and warranties made by a manufacturer of material are usually general in nature and cannot be relied on to protect the architect."

Few architects could have adequate "in-house" testing labs. There is neither time nor money to provide independent tests on most products which go into buildings. (Of course, this is done to a large extent with concrete.) The manufacturers themselves are often testing products in the market.

They cannot always control those licensed to package and distribute their products—such as in the case of caulking compounds.

The manufacturer cannot always rely on his supplier to provide a consistent constituent—such as nylon for sliding door wheels or such as paint base materials.

Most plastic or chemical products cannot be truly tested for the affects of aging in the sun, in a manner equal to actual conditions.

Local manufacturing of products, such as pre-cast terrazzo, is not always subject to strict control or adequate curing. (Even the cement from the manufacturer can vary.)

The reliability of chemical roof, wall, and floor coverings is greatly subject to surface conditions and applicator skill.

Of course, there are failures in old "tried and true" products such as brick, terra-cotta, roof materials, plywood, etc.

There are problems involving laminating glues which do not hold and particle board matrix which is affected by floor tile mastic.

Question: How can the architect assure himself that all products will perform as represented?

Could the answer to the above question be one or more of the following?

1. A building product testing laboratory similar to Consumers Report or Underwriters Labs? (This would have to be as large as the City of Chicago.)
2. A federal bureau such as the Food and Drug Administration? (This would reduce the number of manufacturers.)
3. More effective manufacturer's association control? (This raises the cost of the products and it is hard to encourage participation.)
4. An insurance policy or bond supplied by the manufacturer guaranteeing the suitability of the product? (This does not work in the case of roof bonds.)
5. A clearing house of experience records of products reported by users, such as in the Consumers Report on Automobile Repair Frequency? (This reports bad experience after the fact, however.)
6. Could these court judgments as well as others regarding personal liability be good reason to develop a stronger organization and cooperation to get legislation and/or fidelity funds established for the benefit of all architects? (Similar to law and medical practices.)
7. Could architects refuse to use new products and forfeit the building design practice to others, such as assembly line component manufacturers?
8. Could Building Products Register or CSI Spec Data Sheets require manufacturers to list limitations as well as advantages?
9. Could building codes be more all inclusive in testing and listing acceptable products such as in the case of federal specifications? (This also raises the cost of the ultimate building.)
10. Should architects be allowed to incorporate and thereby limit personal responsibility?

My feeling is that manufacturers should tell the whole truth, architects should be prudent, contractors should read the directions on the container, owners should be generous, lawyers should be reasonable and judges should understand the relationship between them all.

Round Table participants in discussing Mr. Nielsen's topic made these suggestions:

1. Specify products backed by major companies with long established records of integrity and performance.
2. Check existing jobs where material has been used . . . is the owner happy?
3. Manufacturers should be liable for any incorrect or misleading information.
4. Use of CSI Spec Data sheets would solve many current problems.
5. Literature could perhaps list (at least caution) specifier on product limitations.
6. How about an Agency or National Testing organization developed by the Industry to supply product reports to specifiers for their use.

The one conclusion drawn by one Round Table group was classic . . . "Who wants to be a spec writer after the thoughts and data submitted by Mr. Nielsen?"

This joint meeting of the Producers' Council and the Construction Specification Institute has provided the Industry with some thought provoking problems and solutions. Certainly, it can be given a Symposia salute for the down-to-earth approach to these common Industry woes. Jim Barr (SCOPE Editor) concluded his report of this meeting with this stimulating idea . . .

"How about fewer last minute approvals? If you couldn't learn about it in the six months you were working on the plans, how can you learn about it in the last six days!"

Nuff sed.

THE ALL AMERICANS

Jointly sponsored by the National Municipal League and by Look Magazine, the Annual All America City Competition has honored three cities in the Symposia area. Chosen by the Awards Program were Casper, Wyoming; Loveland, Colorado and Phoenix, Arizona. All three were awarded Honorable Mention by the All America Cities Jury. It is, of course, most gratifying to the public-spirited citizens of these communities to be ranked among the top twenty-two cities in America. Symposia is able to bring you the summations of their achievements, thanks to David Major, Executive Vice President of the Casper Area Chamber of Commerce; Mark W. Cordell, Manager of the Loveland Chamber of Commerce, and Ken McClure, Manager of the Phoenix News Bureau. Our appreciation to them.

UP BY THE BOOTSTRAPS

Casper, Wyoming

Casper is located in about the middle of the State of Wyoming in the Valley Basin of the North Platte River. It's not a big city — the estimated population in 1966 was about 43,000 people — but **over a thousand** of them are part of the Casper Area Chamber of Commerce, there are four hundred boosters for Casper's Civic Symphony, and three hundred and fifty of them are interested in the Paradise Valley Playhouse. There are one hundred and eighty-five Kiwanians, 60 members of the Visitor's Bureau — well, Casper has a lot of good citizens working to make it an even better place to live. It wasn't always that kind of a town — it took, what might be termed, a major economic crisis to make Casper the city it is today.

Founded at an historic crossing on the Old Oregon Trail, Casper grew like most Western towns, from trading post to cattle-raising community. Then . . . came oil! By 1895, the first refinery was built, and in a few short years, Casper was the undisputed oil center of the Rocky Mountain West. Thousands of highly trained and highly paid people made Casper a far more sophisticated and cosmopolitan city than its size or location seemed to indicate. Bob Miracle, Vice President of the Wyoming National Bank, tells us what happened to Casper . . .

"It was prosperous, growing, oil-centered, and — we now confess — quite complacent. It seemed the period of automatic economic growth would never end, and we would continue, without effort, to enjoy its benefits.

In the late fifties and early sixties a sense of unease settled upon our city. Reorganization of major oil companies and their subsequent withdrawal from Casper was hinted. Fears about the future were not long in finding foundation in stark facts. Oil companies with major payrolls, community mainstays, one by one began to leave. Six of them departed in one year, taking with them over five hundred well-paid employees, many of them civic leaders of long standing. Gloom spread, and in a few discouraged quarters it was readily conceded that grass would soon be growing in Casper's hitherto busy streets. Remote from population centers which hold for other communities the promise of more ready diversification and more readily available markets, Casper's task seemed insurmountable."

How did Casper's citizens react? Some did, indeed, throw about building a new future.

up their hands in despair, but most of them simply set Broad-scale community planning, spearheaded by the Chamber of Commerce, municipal agencies and educational organizations, was undertaken to evaluate the city's assets . . . and to chart a course.

Here are a few of the specifics employed . . .

Fifty businessmen formed a corporation, invested $50,000 to finance new businesses. This action prompted an even wider sector of the business community to form a promotion and development group which has devoted over $100,000 to a dedicated business development effort.

A visitors and convention program, financed by its participants, was formed to stimulate "tourism." Labor, business and more than 150 local teachers volunteered to provide and man the best Tourist Information Center in the region.

Casper's citizens formed improvement districts and at a cost of over $5 million, to be paid by them, completely renovated 90% of the city streets. They have approved a $4,600,000 bond issue for new school facilities . . . many now complete. They voted a $1,600,000 bond issue to greatly enlarge the Natrona County Hospital . . . a task now almost completed.

The Kiwanis Club sponsored a new planetarium . . . the first in Wyoming, and one of the few in the area. The Little Theater was reactivated, and the civic symphony orchestra and its community concert association has felt

a general upsurge in interest and encouragement.

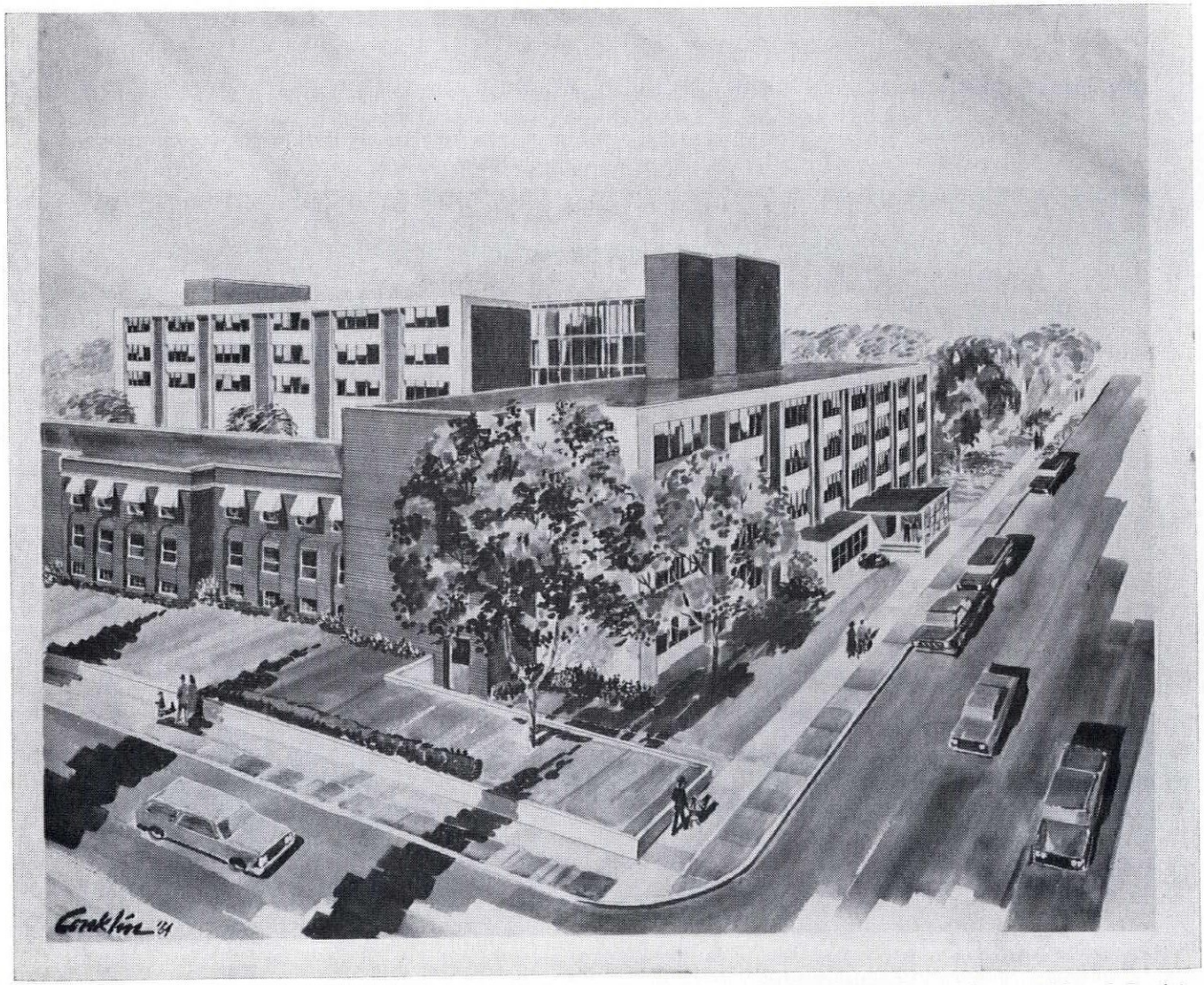
Even the "small fry" have a part in the Casper story . . . the National Champion Junior Drum and Bugle Corps . . . "The Casper Troopers," was organized by James Jones, a Casper contractor. Supported by local donations of over $25,000, these boys and girls have traveled all over America . . . winning every top national competition.

Certainly the climax of the Casper saga has been reached at Casper College . . . as Bob Miracle has said . . .

"One of the most demonstrative, even dramatic, manifestations of Casper's spirit of self-help and the confidence of its citizens that the community's future can be molded by their own hands may be found in Casper College. Created about 20 years ago, it soon became the focal point of community pride. By 1965, its facilities strained to capacity by greatly increased enrollment, the college came to a crossroad — it could expand to grasp its future and help guide Casper's emergence into a new day, or it could stagnate in its cramped posture, its promise unfulfilled. In the days of deepest gloom, shortly after the impending closing of one of our three refineries was announced — the ultimate in a dreary sequence of announced oil departures — the college's trustees, encouraged by business and labor leaders, asked Casper's citizens to assume financial responsibility for a major enlargement of the college. After a drive for support spearheaded by the Chamber of Commerce and participated in by literally every segment of its business, labor, and social spectrum — and in the midst of a darkened economic scene — Casper's citizens went to the polls and approved a $2,300,000 college bond issue by nearly five to one. Supplemented by other loan funds and by generous private giving, a $5,000,000 expansion program — six new buildings — is now underway at the college. An unafraid people had risen to a great challenge."

One might believe that after all this concerted effort, the people of Casper would be ready to rest on their well-deserved laurels, but new goals are waiting . . . and already, work has begun to attain them. Further diversification is sought — too many new businesses and industries are closely related to the petroleum industry. The need for a civic auditorium or like structure poses a pressing problem, and the community has contacted planning consultants, not only for architectural ideas, but public statistical information which will help sell this program. More educational facilities are of vital importance, and much detail work remains to provide both the Symphony and the Playhouse with adequate financing. Each one of these organizations now has the manpower to solve their problems.

What could have been economic disaster has been met by Casper — an All American City — in an All American way. They have simply pulled themselves up by their own boot-straps . . . a classic example of people rising to the challenge to help themselves!



Natrona County Hospital

(Rendering from architects: Fisher & Davis)

THE CITY WITH PROGRESS IN MOTION

Loveland, Colorado

With its Honorable Mention citation in the "All America City" contest, Loveland adds a new distinction to the already distinctive title — "It's a Sweetheart of a City." Each year, over a hundred thousand Valentines are received at the Loveland post office and re-mailed all over the world appropriately marked with the Sweetheart City's cancellation stamp.

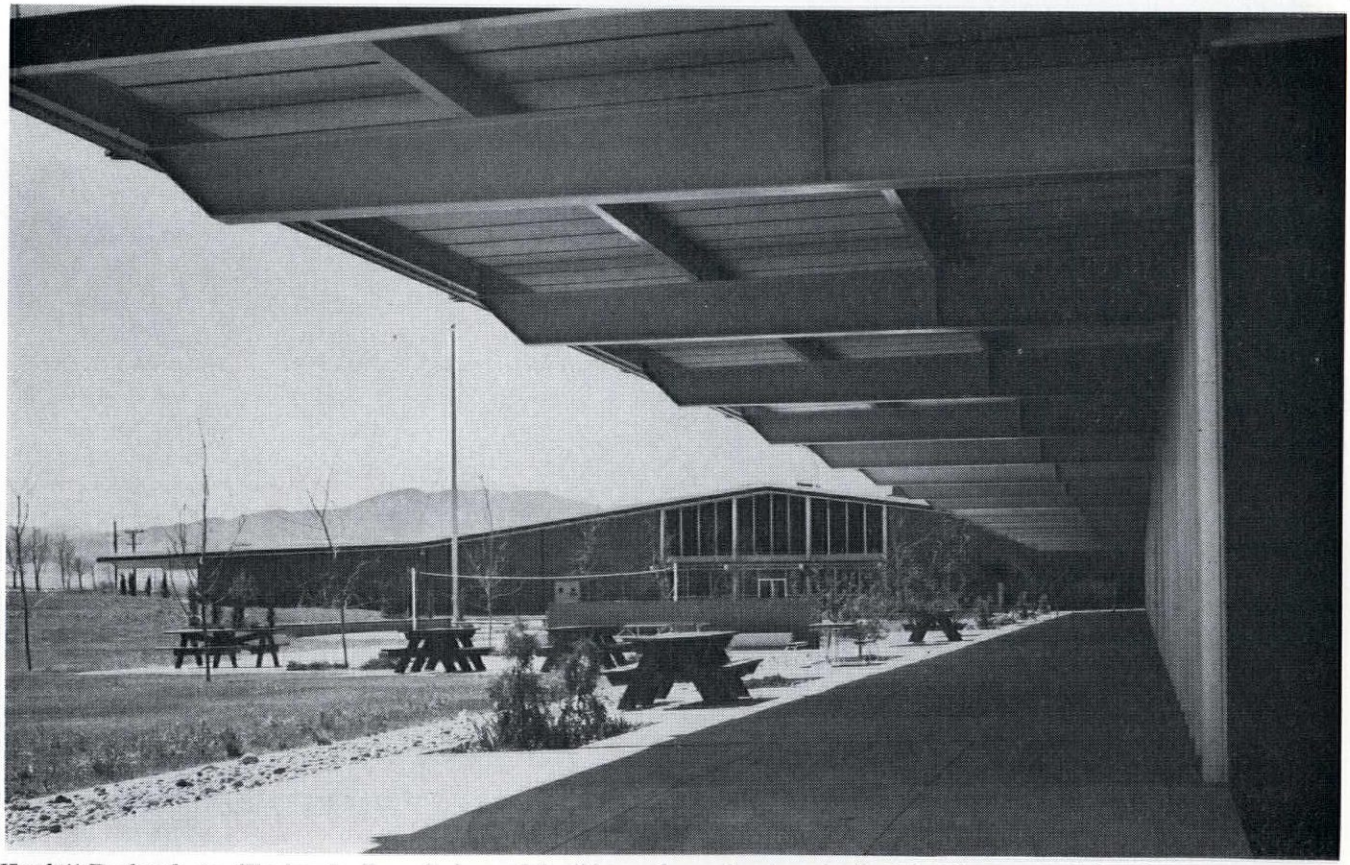
Loveland's claim to fame this Spring however, was for "citizen action" in five civic and business areas under a new banner . . . "The City With Progress In Motion."

In 1950, Loveland was a little town of less than 7,000 people . . . a population figure which has more than doubled in the past decade and a half. With growth, came problems . . . and the desire for further expansion . . . and Loveland has met these challenges in five significant ways . . . as presented to the All America cities jury:

1. **A ten-year Industrial Development Program that began in 1956.**
   At that time, there were 310 Industrial jobs in Loveland. Today, 10 years later, there are 2,500 jobs. Funds to buy Industrial land were raised from businessmen, teachers, National Guardsmen and even children bringing their pennies and nickels to school to help swell the fund to over $60,000.00.
2. **Creation of a citizen's committee on new public building.**
   This committee saw a dream come true when a bond issue was passed to build a new municipal library and a new municipal building which houses all city offices including the fire department.
3. **A citizen's committee on a new form of government.** Again the citizens went to the polls and voted for the Manager-Council form of government.
4. **Joint airport development with the City of Fort Collins.**
   Working with our sister city to the north, the two communities have gone together and constructed the most modern air facility in Northern Colorado. The first paved runway is 6,500 feet long and 100 feet wide.
5. **Construction of a new public swimming pool.**
   Here again citizens came forward when it was determined that the one pool in Loveland was not adequate for present needs. A committee was formed and raised $60,000 to build a new indoor swimming pool. Realizing that it would be used primarily by children, the money was given to the School District to have the pool built in the new High School.

As always, once the wheels of community action have begun to turn — oiled by the pride and enthusiasm of the people themselves — new programs for achievement are initiated. Already in this year of 1967 — Loveland businessmen have formed a "Special Improvement District." Prime objective of the new District is to purchase additional land for off-street parking, and to beautify the core area of Loveland. Cost for these improvements will be approximately $300,000 — a sum to be paid for by the property owners in the core area.

In March/Symposia, we reported on the successful conclusion of such a face lifting project in another small community . . . Grand Junction, Colorado. The article was titled . . . "and a little town shall lead us." With the projected plans in both Casper and Loveland, it does, indeed, appear the region's little towns are in the forefront in the march toward a more compatible urban environment.



Hewlett-Packard, an Electronic firm, is housed in this modern structure in the Big Thompsoln Industrial Park. Hewlett-Packard has close to 300,000 sq. ft. in Loveland and employs approximately 1200 men and women.

(Photo: Loveland Studio)

"ALL AMERICAN" IS A HABIT

Phoenix, Arizona

The Honorable Mention citation in the 1966 All-America City Awards competition brings to Phoenix, Arizona the distinction of being a three-time winner! Of course, you have to shift gears and reach for your Thesaurus when you talk about Phoenix. Adjectives pile upon superlatives when the capital of Arizona is up for discussion.

Even thirty years ago, Phoenix had a population plus four times larger than present day Casper, Wyoming. Today, the city's population tops 515,000, and the metropolitan area is edging toward the million mark. Inevitably, we lost a certain feeling of "person to person" contact. In Phoenix, you deal with metropolitan problems in monumental terms. It's not just "Main Street" that needs its face lifted . . . it is the overall development and maintenance of hundreds of miles of streets and highways — not just **another** swimming pool — but how many **more** swimming pools to augment hundreds in a sun drenched country where toddlers take to the water almost as soon as they leave off pablum.

Phoenix makes no secret of its phenomenal growth — it is equally immodest concerning the reasons. Climate, geographical location, yes, these are factors . . . but the real answer lies in the people themselves. Almost every Phoenician (and there are few native-born) is a walking Chamber of Commerce. He will not only tell you about the 210 sunshiny days per year, his palm trees, his cactus, and Frank Lloyd Wright — he will, **willingly,** work like a dog on citizen committees to solve community problems.

Every community has a reason for being — Denver had gold; Loveland, agriculture; Casper, the Oregon Trail. In 1858, the Phoenix area was given this outstanding send-off in a report to the United States Congress . . . **"The region is altogether valueless. After entering it, there is nothing to do but leave."** The Phoenix News Bureau one hundred and ten years later says . . . "When you plant a mushroom seed and it sprouts overnight, few people are surprised, since mushrooms are supposed to act that way. But when a city does practically the same thing — rising from pre-historic Hohokam Indian ruins to one of the nation's largest modern metropolises in relatively few years — that means: PHOENIX."

And there . . . in the contrast . . . is the wonderfully Western, new brash philosophy that has created Phoenix, which has won it three national awards as an All-American City . . . and predicts its future.

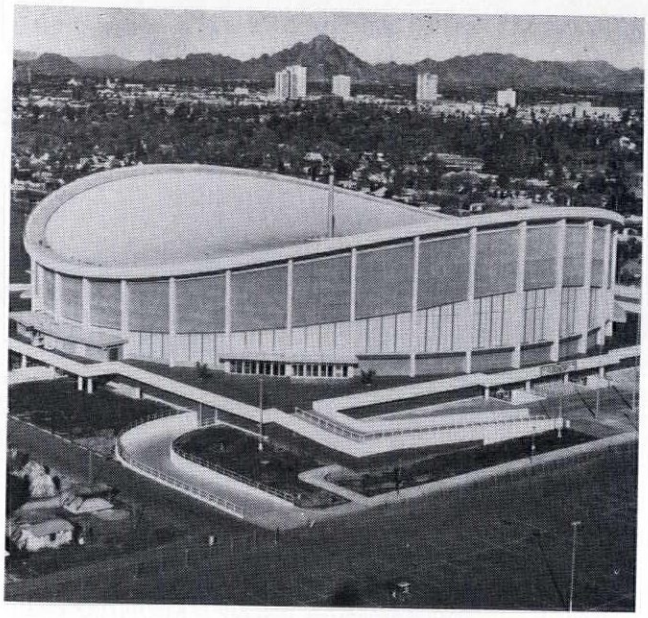
More concretely, industry has been the answer to this phenomenal growth in the past two decades. More than 750 new manufacturing plants have set up operations in the "Valley of the Sun" — employing today, more than 75,000 people. Along with this increase in manufacturing, other new business and commercial enterprises are burgeoning . . . at the rate of close to one thousand annually. Phoenix is also the distribution center for the Southwest, Southern California's Imperial Valley, Nevada, West Texas and Sonora, Mexico.

Today, Phoenix stands at the crossroads . . . but every indication points to more of the same . . . a better and brighter city rising from the ashes of the Hohokam.

* * *

Symposia has been proud to present to you — three All American cities in our All American Mountain Region. We have heard from three communities with three separate sets of problems . . . but all solved in the same way, the All-American way, by the people who live there!

Photographs: Phoenix News Bureau



ARIZONA VETERANS MEMORIAL COLISEUM
Like a giant hatbox on the Phoenix, Arizona, skyline, the new Arizona Veterans Memorial Coliseum at the State Fairgrounds is one of the most impressive in the Southwest. Seating some 15,000 people it can be set up for ice revues, basketball, rodeos and horse shows.

PHOENIX SKYLINE
The "magic miles" along North Central Avenue are giving much of the new skyline look to fast-growing Phoenix. This photograph shows the changing skyline, looking northwest toward the Glendale area.

Colorado's House Bill 1397 Causes Rift in the Industry

(In the article which follows, Symposia has endeavored to present a wide view of the problem plaguing Colorado's architecture/construction community. The problem, of course, is House Bill 1397 passed by the Colorado legislature and as we go to press, awaiting the Governor's action. We have endeavored to publish not only the views of the protagonists, but also other comments pertinent to the subject. Since Symposia's aim since its inception has been to bring about greater understanding and cooperation among all segments of our industry, perhaps this public airing will clear away some of the smoke of battle. Certainly no problem can be so insurmountable that it cannot be given amicable solution by men of good will.)

HOUSE BILL 1397

SECTION 1. **Indemnification agreements against public policy—**
When a covenant, promise, agreement, or understanding in, or in connection with, or collateral to, a contract or agreement relative to the construction, alteration, repair, or maintenance of a building, structure, or appurtenance, including moving, demolition, and excavating connected therewith, to the extent it purports to indemnify any person, other than an owner of an interest in the land or improvements thereon, against liability for damages arising out of bodily injury to persons or damage to property caused by or resulting, in whole or in part, from the negligence of the indemnitee, his agents or employees, is against public policy and is void and unenforceable.

SECTION 2. A covenant, promise, agreement or understanding in connection with contracts or agreements described in Section 1 of this act to the extent it requires the promisor to secure or obtain indemnity from third persons, for the protection of any person, other than an owner of an interest in the land or improvements thereon, from the negligence of the indemnitee, his agents or employees, is against public policy and is void and unenforceable.

SECTION 3. Nothing contained in Section 1 or Section 2 of this act shall be construed to affect insurance agreements and contracts with insurance companies, or contracts relative to the construction, alteration, repair, or maintenance of a building, structure, or appurtenance or facility situated, or to be situated, upon the right-of-way for the tracks, electrical transmission lines or pipe lines of a railroad or other public utility.

SECTION 4. **Effective date—applicability.** This act shall take effect July 1, 1967, and shall apply to covenants, promises, agreements, and understandings mentioned in Section 1 or Section 2 of this act, that are entered into on or after such a date.

SECTION 5. **Safety clause.** The general assembly hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health and safety.

THE A.B.C. POSITION

E. B. Jones, Sr., President
Associated Building Contractors of Colorado, Inc. (AGC)

The "meat" of this bill is contained in its first paragraph and states substantially the same position in regard to third party indemnification as the amended Paragraph 4:18 contained in the General Conditions Document A-201.

The General Contractors feel this bill is necessary because of two primary factors: (1) All architects are not members of the American Institute of Architects, and (2) the General Conditions Document A-201 is available (without revisions) at anybody's blueprint shop—therefore, the A.B.C. feels they must take a stand against any and all non-A.I.A. architects using the unrevised version of the General Conditions Document.

The A.B.C. feels House Bill 1397 incorporates the changes made in Paragraph 4:18 of the A-201 Document into legal terminology and law—and does not in any way change the effect or spirit of the negotiated agreement between the National Committees of both the A.G.C. and the A.I.A.

With this bill in effect it makes the conditions regarding indemnification uniform throughout the industry.

THE A.I.A. POSITION

Max Saul, Architect
Past President/Colorado Chapter
American Institute of Architects

Not since Pearl Harbor has there been such a clever bit of deception as the way HB 1397, the "Indemnification Bill," was put across in the Colorado State Legislature. At the very moment when Contractors (ABC) and Architects (AIA) were sitting at the conference table discussing the new provisions of the AIA General Conditions Document 201, and specifically, Article 4:18, **Indemnification,** the Contractors were sponsoring a bill in the House which would declare such indemnification insurance requirements against public policy and therefore illegal.

Admittedly, there were some clouds surrounding the original wording of Article 4:18 and the Colorado Chapter of AIA (AIA-ABC Liaison Committee) reviewed the Contractors' objections in depth and brought these matters to the attention of the AIA headquarters in Washington, D. C.

In January and February of 1967, the rewording was published which **was approved** by the AGC, the national arm of the local Associated Building Contractors of Colorado. Also approving the rewording of 4:18 was the Association of Insurance Companies who said that such Indemnification insurance would be obtainable under the new wording. This information was widely distributed and we in Colorado felt that the controversy was resolved. However, the maverick local ABC saw fit not to go along with their own national president and pushed the HB 1397 in the Colorado legislature.

At the time of this writing, the bill is on the Governor's desk waiting for his signature to make it law on July 1, 1967. Now we can't march on the state house asking for a veto with signs saying, "I BECAME PREGNANT BECAUSE OF THE INDEMNIFICATION BILL NO. 1397," but if there was ever a need for an abortion for an unwarranted and unnecessary piece of legislation, this is it. Criminally attacked, like at Pearl Harbor. Those of us who were at the State Capitol and heard the legislators make such false and misleading arguments on the floor during debate were shocked. Most members of the House and Senate admitted it was confusing and did not fully comprehend the need for such a bill. If the Architects were not at the conference table discussing the matter, we would have been at the State House fighting it.

It seems ironic that a segment of the

industry, the Contractors, who are champions of government laissez-faire should be seeking more legislative and government controls in our already overburdened daily affairs.

THE C.E.C. POSITION

Stated in a letter dated April 20, 1967 to Governor John Love from James H. Konkel, President Consulting Engineers Council/Colo.

The Consulting Engineers Council of Colorado is opposed to House Bill No. 1397 "Concerning Certain Indemnification Agreements in Certain Contracts" and ask that you veto the bill. We are opposed to the House Bill 1397 for the following reasons, and feel that they merit your consideration:

1. The bill restricts the rights of private parties to contract with one another.
2. The bill is of a special purpose nature.
3. The bill declares that it is against public policy to indemnify against negligence. All bills must contain such statements. In this case, the Supreme Court has ruled that indemnification is legal and is in the public policy; therefore, the bill is in opposition to an existing Supreme Court decision.
4. The bill is an outgrowth of a dispute between AGC and AIA which has already been settled at a national level.
5. The Governor of New Mexico has vetoed a similar bill recently and all bills have been withdrawn by the AGC representatives in other states. If signed, Colorado will be the first, and only, state with such a statute.

Your consideration of our views is appreciated.

THE INSURANCE PICTURE

G. A. Talbert, President
G. A. Talbert, Inc.
Surety Bonds and Insurance

I have reviewed the revised HB 1397 which outlaws indemnification agreements in favor of so-called "third persons." This law does not affect in any way the entering into of contracts which contain an indemnification agreement between a contractor and an owner.

Previously we have been willing to insure hold harmless agreements where third parties were involved but have been extremely reluctant to do so in these cases where we were insuring the sole negligence of the third party. Where this third party was involved in a suit because of the negligence of the contractor then we had little or no objection.

When the A.I.A. issued their revised form A-201 which purported to make the contractor indemnify the architect for those things which come under the professional liability of the architect then, of course, this is when the trouble began because this type of agreement was practically uninsurable. Besides being uninsurable it destroys the image of the architectural profession and was a very ill-advised act on the part of the A.I.A. The revised language of Paragraph 4:18 has been held by most insurance companies to cure the original defect and that the indemnification agreement was and is now insurable, except in Colorado if HB 1397 is signed into law.

From a pure insurance standpoint I think it can then be said that it doesn't make any difference to us if HB 1397 is the law or whether we are asked to insure the agreement contained in A.I.A. Form A-201. We just don't want to insure any third party under a broad form hold harmless agreement (where the third party is solely negligent) or we don't want to insure any kind of a hold harmless agreement where we are incurring any liability for the errors or omissions (professional liability) of an architect.

C.S.I. COMMENT

Reprinted from:
Denver-Scope
O. James Barr, Editor

This might be titled "Americana, 1950-2000." Or "Don't work it our yourselves, get the government to do it." It is a sorry commentary on our times that more and more government interference is sponsored by our own defaults. Unfortunately, this bill appears to be just one more example. What makes it hurt more is, of course, the fact that it hits so close to home. It affects **our** State, **our** Builders, **our** Architects, and **our** Individual Freedom! The pros and cons of the bill are not the target of your irate editor. It appears to be fair and do no more than legislate the agreement already reached between the ABC and the AIA, namely that the **revised** "hold-harmless" clause of the AIA General Conditions was acceptable to both groups. **That's the target!** Why couldn't the two groups formalize their agreement **without adding another law** to the suffocating mass already engulfing the one time individuals of this country!

ANOTHER OPINION

In order to obtain still another opinion, Symposia requested comment from a distinguished member of the architecture/construction community who is not a resident of Colorado, but who has many years' experience in legislative matters. His comment is as follows:

When a Contractor agrees to indemnify an Owner against loss from liability or claims for property damage, personal injury or death arising out of operations under the contract—such a procedure is regarded as reasonable and normal and is fully insurable with a number of insurance companies.

The Architects, as the Owner's representative, would appear to be a reasonable and logical party to such indemnification as an extension of the Owner's technical involvement. Certainly the Architect or the Owner is not entitled to be protected against losses or claims arising out of their own negligent acts of commission or omission—and under the AIA Contract Forms they do not ask to be protected against such involvement — only against liabilities arising from negligent acts or situations for which the Contractor alone is responsible.

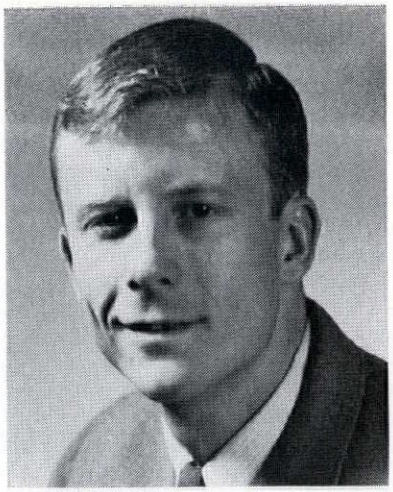
In cases where the Owner is also the Architect—or where the Owner designates the Architect as his Agent—there is certainly reason to believe that this law would run into serious trouble in the matter of interpretation —and as written the language of this bill would surely offer insufficient clarification as to whether or not the Architect was not also covered against liability claims.

SECTION 3 of this bill gives ample evidence of the fact that THIRD parties are covered against liabiilty claims in connection with work regarding pipe lines, rights-of-way, utility easements, etc. The contracts for work of this type are almost always written to protect the third party—who may be, and usually is, someone other than the Owner as named in the Contract—and these contracts are, and have always been, insurable risks. So, it would seem to me that, with the exceptions named above, with the very uncertain language to determine possible coverage for an Owner's agent, or representative, and with the fact contracts covering the Architect are available for Insurance Coverage, this law is certainly not constitutionally sound.

Regardless of what laws may be passed by the Legislature against the validity of indemnification for a third party, or what specific indemnification powers may be contained in a contract, it still remains a matter for the Courts to decide whether or not such laws are indeed valid.

Until this law has withstood a test case in the Courts and a decision rendered to the effect that it is indeed a valid law—it is my own opinion that this HB 1397 would be difficult and unpopular in its support.

Architects Make Awards



ROBERT K. FULLER AWARD
Robert T. Borth

FISHER TRAVELING
SCHOLARSHIP AWARD
Charles "Chief" Boyd

The Colorado Chapter of the American Institute of Architects held its Annual Awards Banquet at the Denver Hilton on the evening of April 20. John D. Anderson, Chapter President, presented an Honorary Membership for Distinguished Service to Landscape Architect and Planner S. R. DeBoer of Denver. Only the fourth such award given since the Colorado Chapter was founded in 1892, Mr. DeBoer was given a standing ovation by those present. Mr. DeBoer was born in Holland, a graduate of the Royal School of Landscape Design, and has lived in this area for almost sixty years. Certainly the Denver area is a much pleasanter place in which to live, thanks to the foresight and the talents of Mr. DeBoer.

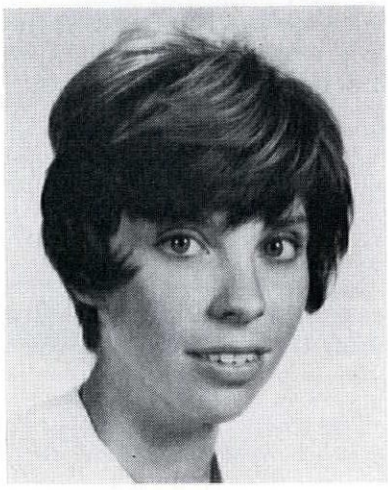
Dean Devon Carlson of the School of Architecture/Colorado University, Mr. Kenneth R. Fuller and Mr. Alan Fisher shared the pleasant chore of presenting the Awards and Scholarship to students of Colorado University. Mr. Fuller presented the $600 Robert K. Fuller Scholarship Award to Robert T. Borth, an architect with Walton and Madden of Riverdale, Maryland, for graduate study at Columbia University. Mr. Borth is a 1966 C.U. graduate.

Mr. Alan Fisher had something under his hat for Charles "Chief" Boyd. Mr. Boyd, a 1964 graduate of C.U. received the first $1,000 Arthur A. Fisher and Florence G. Fisher Traveling Scholarship award. During his last year at the University, "Chief" Boyd designed a memorial to the Cherokee Indian nation, which is now under construction at Tahlequah, Oklahoma. Mr. Boyd will use his Traveling Scholarship for study of the Pre-Columbian ruins in Central America. Mr. Fisher also remembered the newest member of the Boyd family . . . a daughter born April 3rd . . . with a small gift.

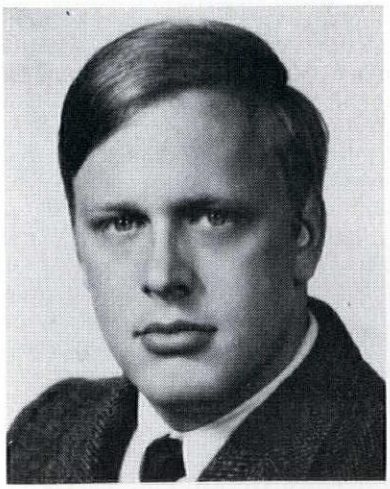
Philip L. Davis, Jr., received the Monarch Tile Company Award in recognition for his excellent scholastic and activities record which shows promise of future architectural attainment. Design Certificates were presented to Steve Kent Loos (third year student), Ross P. Cooney (fourth year student), and to Caroline Cummings Hoyt (fifth year student). A.I.A. School Medal and Mention Awards were given to Mrs. Hoyt and John Orcutt. Walter Sawicki III received the Alpha Rho Chi Medal, Ronald H. Holsman the American Concrete Institute Award and John Orcutt received the Faculty Award.

Honored for his many years of dedicated service to the Colorado Chapter, AIA, was Richard K. Ayers, Public Relations Consultant, who for ten years served the Chapter as Executive Secretary.

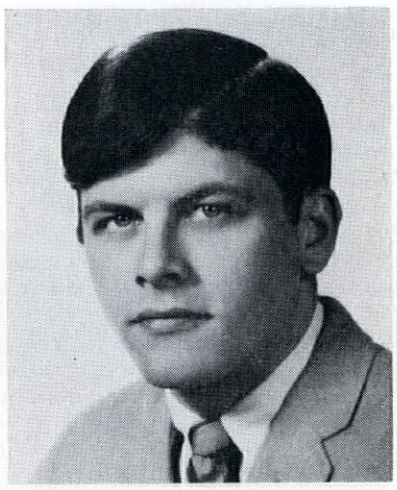
Robert Alton Peterson, noted lecturer, was the featured speaker at the banquet, who presented his strikingly illustrated program on the capital city of Brazil . . . "Brasilia."



SCHOOL MEDAL/DESIGN
CERTIFICATE
(FIFTH YEAR STUDENT)
Caroline Cummings Hoyt



AMERICAN CONCRETE
INSTITUTE AWARD
Ronald H. Holsman



MONARCH TILE AWARD
Phillip L. Davis, Jr.

Photos: Colorado University

The Central Arizona Chapter of the American Institute of Architects and the Architectural Department of Arizona State University at Tempe held their Annual Award Dinner and Exhibit on May 11. Top honors were given to Leland B. Peters of Phoenix, a fifth year student in Architecture.—Recipient of the American Institute of Architects Henry Adams Fund Award and the School Medal, in recognition of his scholastic and other achievements, he also won the fifth year Central Arizona chapter AIA award for outstanding scholarship.

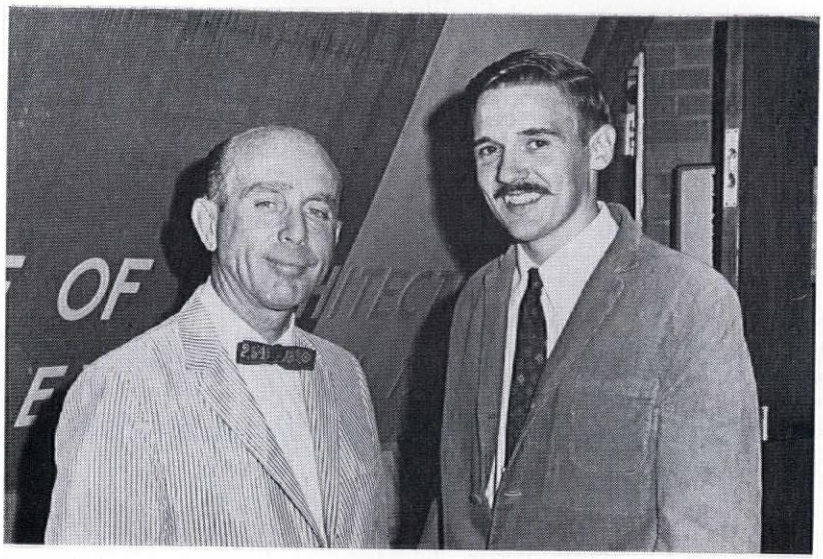
Other fifth year students honored at the banquet were James D. Altenstadter, Scottsdale, runnerup for the Henry Adams Fund award; and David L. Foote, Alamogordo, N. M., recipient of the Alpha Rho Chi medal for service to ASU and the College of Architecture.

Some $8,000 in awards and scholarships were announced at the 10th annual awards banquet, according to James Elmore, dean of ASU's College of Architecture. Also featured at the event was an exhibit of student work. Fourth year students winning major prizes were Mark W. Seidner, Tempe, the Weaver and Drover prize of $1,500 for a summer of study at Fontainebleau, France; James E. Snider, Tempe, an Architectural Foundation traveling scholarship enabling him to spend the summer in Wales working with Cwmbran Development Corporation on a new town project.

Also, James P. Leese, Tempe, a $500 National Endowment for Arts travel grant; Loren A. Dickinson, Phoenix, a $500 Monarch Tile Scholarship; Jon M. Pomeroy, Tempe, a $300 Construction Specifications Institute prize; Robert H. Oshatz, Los Angeles, a $250 Reynolds Aluminum student prize and the Portland Cement Association prize of $50.

Central Arizona chapter AIA awards for outstanding scholarship were given to Leese, fourth year; Gordon E. Davis, Tempe, third year; Daniel P. Aiello, Tempe, second year; and Gary A. Korkola, Santa Ana, Calif., first year.

Third year awards and recipients include Architecture Foundation $250 scholarship to Robert B. Ballard, Tempe; Varney, Sexton, Sydnor $250 scholarships to both Jon R. Hamilton, Casa Grande, and Davis; Lee Churchill Masonry Memorial $500 award, divided between Eric T. Liebi, Orange, Calif., first place; John A. Chapman, Phoenix, second place; and Michael A. Curry, Los Angeles, third place; and the Field Trip Sketch prize to Ballard.



James Elmore, dean of the College of Architecture at Arizona State University, congratulates Leland B. Peters, of Phoenix, fifth year architecture student who won top honors this year, including the coveted American Institute of Architects Henry Adams Fund award and the School Medal for scholastic and other achievements, as well as the Central Arizona chapter AIA award for the fifth year student with the highest academic standing.

Mr. Frederick P. Weaver, left, and Mr. Richard E. Drover, right, examine model made by Mark W. Seidner, of Tempe (center), a fourth year student in the Arizona State University College of Architecture who won the $1,500 Weaver and Drover prize, enabling him to undertake a summer of study in Fontainebleau, France. *(Photographs: Arizona State University)*

Second year awards and students receiving them were: Architecture Foundation $250 scholarships to both Billy G. Garrett, Las Cruces, N. M., and James W. Garrison, Phoenix; Central Arizona chapter AIA $250 scholarship to Aiello; Haver, Nunn and Jensen $250 scholarship to Jennifer Lee Schurig, Mesa; and Southwest Pine Association $200 prize to Clemente A. Troncoso, Pasadena, Calif.

First year awards and recipients are Phoenix Blue Print Company $250 scholarship to Margareto S. Enriquez, Phoenix; Central Arizona chapter AIA $250 scholarship to Robert J. Bacon, Scottsdale; First National Bank of Arizona $250 scholarship to Roger E. East, Scottsdale; and Sun Angel Foundation $200 scholarships to both John E. Lawless, Scottsdale, and Doyle W. Brightenberg, Tempe.

symposia/around the region

wyoming

Gerald Deines/A.I.A.
N. A. Nelson/AGC

Mr. N. A. Nelson of Sheridan (Wyoming AGC President) — reports a state-wide meeting of the Wyoming Chapter has been scheduled for July 7 at Teton Village. He also extended a cordial invitation to Symposia to attend. Program material to come.

Wyoming members of the American Institute of Architects attending the National Convention in New York City were George Tressler from Cody, Bob Holzinger from Casper and Bob Postin of Cheyenne. Mr. Postin is the Vice President of the Wyoming Chapter.

utah

A Salt Lake City consulting engineer, George W. Poulsen, Jr., was awarded the distinguished Past Presidents' Award of Consulting Engineers Council of the United States for outstanding service and contribution to CEC. The announcement and presentation was made at the closing banquet May 11, 1967, of the First International Consulting Engineering Congress at the Shoreham Hotel, Washington, D.C.

arizona

On May ninth, three groups met together to enjoy the slide presentation on "The New Town of Brasilia" by lecturer, Robert Peterson. The Central Arizona Chapter of the American Institute of Architects, the Phoenix Producers' Council and Arizona State University were the sponsoring organizations. Mr. Peterson spent some two years at Brasilia during construction, and both his pictures and commentary were very enjoyable.

colorado

Mr. B. B. Armstrong of Roswell, New Mexico, National A.G.C. President, has announced the following National Committee appointments from the Colorado Contractors Association, Inc. R. J. De La Castro will serve on the Associated Distributors-AGC Joint Cooperative Committee; Harold H. Short on the Public Relations Committee; Gene Lewis on the Safety Committee and the Safety Engineers-AGC Joint Cooperative Committee; Hoyle Lowdermilk will serve the Bureau of Reclamation Task Unit; Harold Stillman appointed to the Corps of Engineers Task Unit; Edwin W. Vandervort will serve the Equipment Expense and Tax Committee. National Directors from CCA are Arthur S. Horner, Walter R. Schmidt and Stanley Larson.

Kadish Accredited

Harvey A. Kadish (Hak to his friends) has been accredited by the Public Relations Society of America. Mr. K. is well known throughout the architecture/construction community for his fine work as Public Relations consultant for the Consulting Engineers Council/Colorado.

new mexico

James R. Cushing/C.S.I.
Bradley P. Kidder/F.A.I.A.

C.S.I.—Albuquerque

Delegates to the C.S.I. National Convention from Albuquerque were Arthur L. Matthews and Robert J. Schmidt.

Mr. Cushing is retiring this month as President of C.S.I. after a smashingly successful year at the helm. Albuquerque C.S.I. has grown by leaps and bounds and can look back on a really great first year. Mr. C. will serve as "Advisor" during the 1967-68 year, and will, of course, attend all Board Meetings and serve on many committees.

Construction Practices Council

More than one hundred persons attended the "General Industry Briefing" held by the Construction Practices Council of New Mexico on April 28th in the new University of New Mexico Arena in Albuquerque.

This marks another milestone in the history of this organization, founded November 3, 1965. After "Briefing Session I" which was held on February 3 for officials of Education that is . . . Albuquerque Public Schools, the University of New Mexico and New Mexico State University, and "Briefing Session II" on April 5 in Santa Fe for State of New Mexico officials, "Briefing Session III" was held to acquaint members of Industry with the Council's activities and objectives.

The program opened at 9:45 a.m. with a resume of "Pre-Council" bidding conditions by M. F. Fifield, Director of the Physical Plant Department at the University of New Mexico and current Chairman of the C.P.C. Board of Directors. Joe F. Boehning, the Architect's Representative to the Board, reviewed Symposium I and II, and the Study Committee program of 1966. Study Committee Chairmen then reported on each of the eight Statements contained in the C.P.C. Guideline which was published on January 15th, 1967. (The Statements were printed in full in the April issue of Symposia).

Current Continuing Study Committees have been assigned to research the subjects of "Owner-Architect Relations," "Pre-Qualification of Contractors," "Specifications," and "The New Mexico Plan." A review of their activities was given by each Committee Chairman.

The final hour of the Briefing Session, from 11 a.m. until noon, was well spent in open Floor Discussion, with all the questions "fielded" by members of the C.P.C. Board of Directors and their legal counsel.

Santa Fe Plaza

The Plaza improvement goes forward slowly but surely. It looks now as if it may be completed by July.

Park Service Headquarters

The General Services Administration has advertised for bids for the restoration and renovation of the National Park Service Headquarters Building in Santa Fe. Mr. Kidder writes, "I believe this is the only building, or certainly the only Office Building built entirely of adobe that the G.S.A. administers . . . and since they admittedly know very little about adobe construction they looked to a Regional Architect with experience in this type of construction to prepare the drawings, specifications and the recommendations for this work."

Chosen for the job — the firm of McHugh and Kidder, Architects, of Santa Fe. A logical choice since Mr. K. has had some thirty years experience with adobe building, and the firm is certainly most sympathetic to the type and style of architecture found in the original building.

Incidentally, the firm is now "McHugh and Kidder" as Mr. Plettenberg withdrew from the firm on April 1st to accept a job with the State of New Mexico where he could not only continue with his architectural work, but also log some time as a pilot since his new job will involve considerable flying time.

State Meeting

The Santa Fe A.I.A. Chapter's State meeting is set for August 4-5.

There will be more to report on the program planning a little later.

SYMPOSIA

engineering study II

(Sixteen engineering achievements of United States Consulting Engineers in 1966 were selected as finalists in the 1967 Engineering Excellence Awards competition of the Consulting Engineers Council of the United States. The achievements are reflected in the cross section of projects and innovations designed by engineers in private practice. Civil, structural, sanitary, electrical, mechanical and industrial engineering disciplines are represented. Three of these nominated projects from the Symposia region received Superior Ratings in the competition. We are extremely proud and pleased to present these projects in the Symposia Engineering Study Series.)

newspaper printing company

by R. W. Becker
Technical Service Company
Denver, Colorado

At the outset, it should be pointed out that Technical Service Co. regards a newspaper as a manufacturing plant. It is an industrial facility reflecting its own specialized needs just as every other manufacturing plant does. The planning techniques and singularly graphic presentation can be considered as applicable to the design of any industrial operation with similar environmental limitations. Initiated by a need for considerably more space, the project first revolved around testing the three alternatives which automatically come to mind:

Build higher on the original site.
Find a new site and build an all-new facility.
Build on the next block and try to design around difficulties in communications and contacts.

Whatever the solution, efficient operation could not, of course, be sacrificed. Building a completely new plant would have been easy but costs and problems inherent in operation at locations where sufficient land was available were strong handicaps. These considerations made it necessary to explore in depth the possibilities of expansion into the next block. Connecting bridges and a tunnel at basement level are conventional devices for providing contact and communication when parts of operations are separated by city streets. They provide some measure of facility—sort of making the best of a basically imperfect situation.

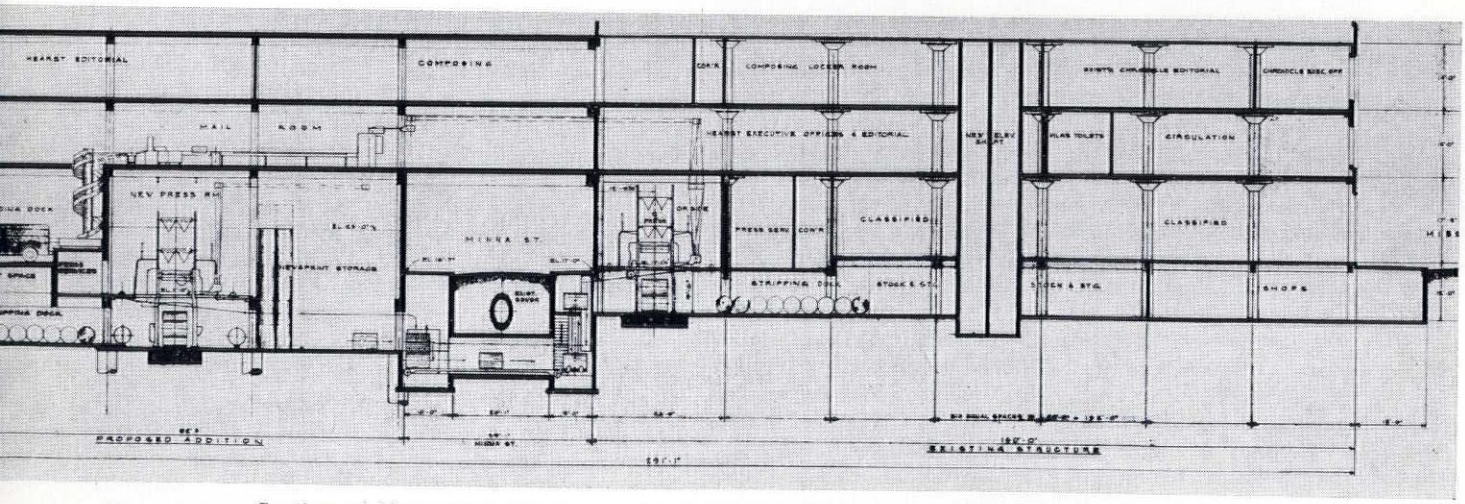
Perhaps because it was so very important that the consultant evolve a really good solution, various expedients, some "far out" beyond conventional thinking were checked out.

One of these flights of logical extension of existing facts started with the conventional multi-storied bridge and went on to the conclusion which was finally adopted. It said: If we can build weatherproof corridors across the street, why can't we make the corridors wider—why not as wide as the rest of the addition will be? Then, we could make working areas both on the bridge and in the additional conventional building just as if the whole were a single building—just as if the expansion were on the next lot, rather than across a street.

In this particular case, street floor contact and communication was not required due to the way the space in the new building was to be used. In other circumstances, the wide bridge, unlike the narrow one, provides complete shelter from rain or snow at street level where there must be separation of the two structures.

Initial planning brought out more benefits as it became apparent that layout and work flow were suddenly unrestricted by need to group inter-functioning operations separately from other groups. In this case, nearly 15,200 square feet of space (on two floors) could be had without buying or leasing ground area and without foundation cost. In many ways, it became a building in the air.

After complete practicality had been established, and tentative layouts had advanced to the point that it was clear that an efficient operation could be established, the solution was recommended to the client.



Section of Newspaper Plant . . . showing both addition and existing structure.

A unique method of presentation was used. A method which would quickly and clearly show the client the excellent work and personnel flows. Time and budget did not permit a scale model, so a two-dimensional version of a scale model was created. This consisted of a series of floor plans drawn to a conveniently small scale and arranged in register with each other in a bound array. The sheet facing the reader when the cover was lifted showed the top floor. When this was lifted, the next floor below appeared, and so on to the basement. This last "page" extended below the others and provided a cross section of the entire project which could be seen and referred to regardless of which floor level was being studied. Carefully selected colors were used to identify different uses for the various areas while solid and broken arrows showed the flow paths of materials and personnel. Vertical flow was easy to visualize with the floors mounted precisely page by page, one above the other. This device turned out to be "a building-in-a-briefcase," a concept selling Technical Service Co.'s services in the succeeding stages of planning and engineering.

Acceptance of the concept by the client was, of course, conditioned upon gaining City approval of using the air space over one of its streets. The "flip chart" or "building-in-a-brief-case" again proved a clear, concise tool for developing understanding. Showing City officials exactly what the outcome would be like helped greatly in securing the necessary permits.

Spurred on by results of imaginative engineering within limits which only required the results to be practical and able to justify any costs greater than those of conventional approaches several noteworthy innovations were incorporated into the material handling systems.

The first was storage and removal from storage of bulk materials entirely from above. This concept met two important objectives: to make maximum use of available storage space and to operate with a view to possible seismic activity. The main storage area (in this case, used for rolls of newsprint) was designed to be loaded and unloaded exactly like the hold of a ship except, in this case, the "hatches" were as large as the floor. No aisle space is used and storage is solid, wall to wall. While materials will be "turned" on schedule to avoid deterioration, the general plan is to establish even, level top heights in this area and use the last-in, first-out plan for daily operation. The overall system uses this storage as a surge tank and reserve against possible interruption of supply flow. Accordingly the flow plan is arranged so that incoming materials can be sent directly into the process or into storage with equal efficiency and facility.

Another noteworthy solution to a difficult problem came about when the City refused to extend permission to load outgoing products on the City street. This forced the client to revise his shipping operations so as to load his trucks on his own property. The only feasible point for such an operation was on the far side of the new construction. Conveyors routed around the construction area would have been long, very expensive and would have required several 90-degree changes of direction. These can be troublesome and when a product has a valuable life of only a few hours, no delays in shipping can be tolerated. Technical Service's solution, as in the instances cited, was imaginative and straight-forward. A straight—minimum distance, minimum cost—conveyor was designed to pass right through the construction area at a level which would permit the building to be built around it. When the building is completed and the new shipping facility which is located along the side adjacent to the present "temporary" area is fully operative, the temporary conveyor will be removed, the openings left in the walls will be closed so that no trace of the puncture of the new building will remain.

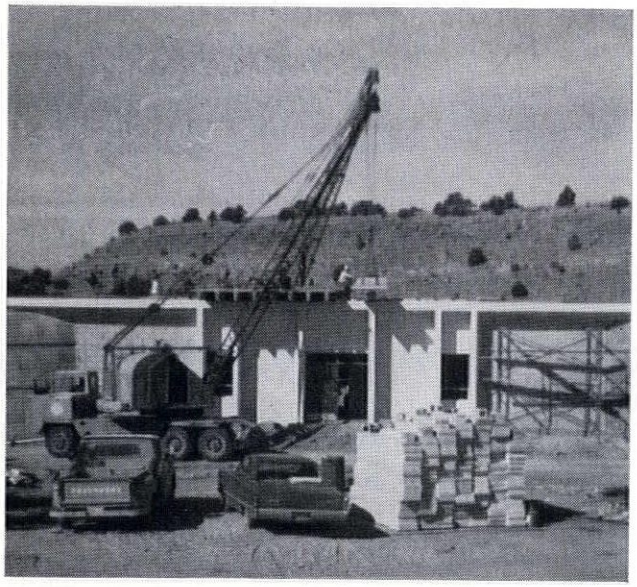
white rock sewage disposal plant

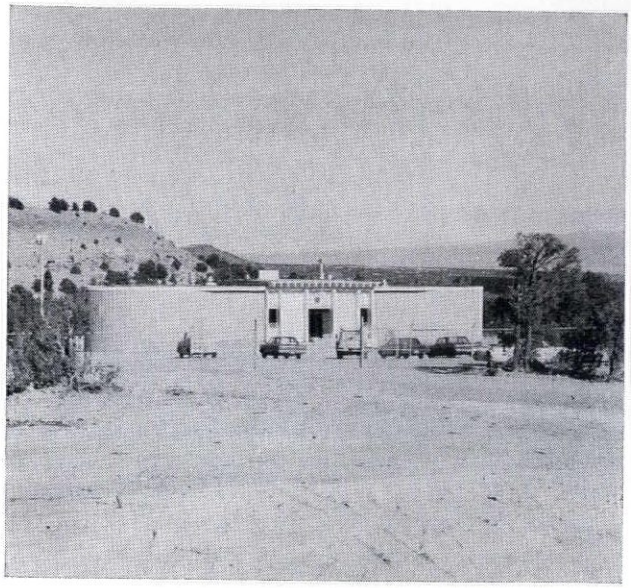
by Daniel F. Molzen, P.E.
D. F. Molzen and Associates, Inc.
Albuquerque, New Mexico

On May 28, 1965, D. F. Molzen and Associates were retained by the United States Atomic Energy Commission, Los Alamos Area Office, to provide engineering planning, design, construction plans and specifications, and construction inspection for a proposed water distribution system and sewage disposal plant. The budget for the sewage disposal plant given to the Architect-Engineer was $450,000.00. Specific criteria for the design of the sewage disposal plant was as follows: (1) The sewage treatment plant should provide primary and secondary treatment to serve the community of White Rock with a maximum housing of 1380 homes. The plant was further to be provided for future expansion to 3000 homes and an estimated population of 11,500 persons not later than 1971. (2) The proposed construction of the sewage disposal plant must conform to the minimum design standards of the A. S. C. E. Manual of Engineering Practice No. 36 and No. 37 and the requirements of the Department of Public Health of the State of New Mexico. (3) The site being in a scenic area and adjacent to a scenic drive should provide a pleasing appearance to the residents of the area. (4) The facilities should be so designed as to provide a maximum degree of treatment with a limited number of operating personnel. (5) The site proposed for the sewage disposal plant was underlain in its entirety by volcanic basalt and tuff which were laid down as a result of the extinct Valle Grande Volcano.

The planning for the subject facility brought forth an interesting development in that the effluent, after treatment by the plant, was to be discharged to the Rio Grande River. The Rio Grande River in the area of discharge is a scenic area and the quality of effluent would necessarily be extremely good. The effluent, after leaving the plant site, was to be discharged to a minor stream, which falls approximately 200 feet over a small waterfall and then follows the water course, dropping approximately 500 feet in elevation to the Rio Grande River.

The plant was designed for treatment using conventional methods of primary and secondary settling, a trickling filter and separate sludge digestion. The plant was so designed as to provide utilization of the sewage gas from the digesting sludge to provide fuel for a sludge heater.





Progressive stages of construction—White Rock Disposal Plant.

This gas is presently being mixed with natural gas to provide the necessary heat for proper sludge digestion. After the plant is expanded to its ultimate design capacity, there will be enough gas developed from the sludge to provide full operation on sludge gas alone.

Due to the fact that the plant was to be operated with limited personnel, the operation was made as nearly automatic as possible, but yet simple enough for local area maintenance and repairs. Time clocks with manual override features are used for pumping of settled sewage, alternation of effluent recirculation pumps, and other items within the plant. Sludge recirculation and heating is provided for by sensing the sludge temperature and providing automatic start-up of the recirculating pumps, along with the boiler and heat exchanger to provide the necessary heat control. Various points of inspection of sludge as well as sampling of the sludge were designed to provide the operator with continual monitoring of the plant operation. A supervisory panel was installed immediately over the operator's desk using lighted start-stop buttons to allow the operator to change the operation of various control systems merely by pressing the lighted button. The lighted buttons allow the operator to tell at a glance which of the pumps are operating and which operations are being performed. In addition, a flow meter is installed immediately over the operator's desk to allow at a glance, the 24-hour monitoring of the flow through the plant, the instantaneous flow through the plant, and a total flow through the plant for the preceding 24-hour period.

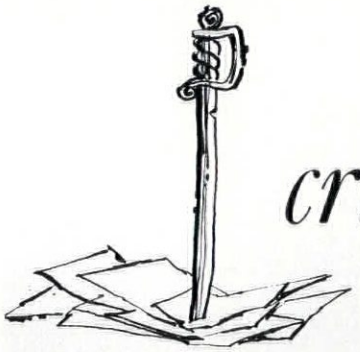
Due to the limited amount of topsoil in the area it was necessary to provide a solution for the insulation of the digestion tanks, other than the use of dirt embankment. After considerable investigation, it was determined that the most economical approach to this problem would be the use of two inches of styrofoam placed on the outside of the digester tanks and protection of these styrofoam insulation panels by the use of factory coated, epoxy painted metal building panels. It was estimated that this would result in a net saving in construction cost of approximately $8,600.00. The contractor's bid brought forth this saving of approximately $8,823.00. In addition to the reduction in construction cost, the use of styrofoam and metal panels provided a better heat retention than methods used in the past and it is estimated that this will save approximately $12,000.00 to $15,000.00 per year in operational costs for heating of the sludge.

The use of precast roof T's along with the styrofoam insulation and metal panels has provided an economical as well as a pleasing design. The facilities include complete laboratory facilities for the testing of the sewage.

Bids were opened December 15, 1965, for the project which included not only the construction of the sewage disposal plant but improvements and extensions to the water distribution system. Burn Construction Company, Inc., of Las Cruces, New Mexico, was low bidder for both projects and was awarded the contract on December 20, 1965. The sewage treatment plant was bid at $379,186.05 by Burn Construction Company and work commenced on the project January 15, 1966. Work was completed and accepted by the Atomic Energy Commission on December 20, 1966, and turned over to the County of Los Alamos for their operation on January 1, 1967. During the construction of the project, it should be noted that there were no change orders required for the sewage treatment plant with the exception of the addition of a second water seal unit for the effluent pumping station. This is a standby unit and was added at the request of the County of Los Alamos.

The plant includes a grit removal unit, parshall flume, a metering station, primary clarifier, trickling filter, secondary clarifier and effluent recirculation pumping station, two stage digestion with heat provided to the digesters. The plant is so designed to provide gravity flow through the plant in the event of an electrical failure, however, recirculation of the effluent for reintroduction to the plant cannot be accomplished in the event of a power failure. Tests by the County of Los Alamos and the New Mexico Department of Public Health indicate that the plant provides a B. O. D. removal of approximately 93.6 percent. Without recirculation of the effluent, the plant provides 82 percent B. O. D. removal. The plant is virtually unattended during the night hours and weekends. During the night hours only periodic checking is made by a watchman to insure that all equipment is operating. Consultants used by the Architect-Engineer for this project were Uhl & Lopez, C. E. C., Electrical Consultants; Bridgers & Paxton, C. E. C., Heating and Ventilating; and John B. Reed, A.I.A., Architect.

The Architect-Engineer was extremely proud to have received a letter of commendation from the Area Manager for the United States Atomic Energy Commission for this project.



critique

(Symposia means a free interchange of ideas—we want you to express your ideas, thoughts and opinions on any and all architectural and building subjects. Simply address: Symposia, 4070 Estes Street, Wheat Ridge, Colo. 80033.)

(Nary a bull-dozer in this month's mail-bag . . . but we're going to give Symposia a first-year birthday present by publishing some of the lovely bouquets! Thank you so much!)

Dear Fletch:
I have just read with great interest and great delight the May issue of Symposia, and need I tell you how very pleased I am with your coverage of Skyline from the cover to the last word of the article?
As I mentioned to you the other day, I would like to congratulate you on the high quality of your publication and the excellent manner in which it is being published. I particularly would like to extend my personal thanks for your treatment of Skyline.
My very best wishes for the continued success of Symposia.

STERLING KAHN, Chairman
Denver Urban Renewal Authority

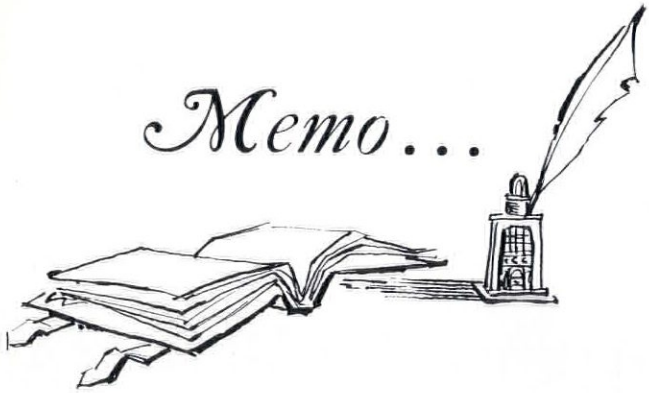
Gentlemen:
I appreciate receiving a copy of your magazine monthly, but I would like to have my address changed on your mailing list. Your fine publication offers an excellent means of keeping up with the activities of the various organizations in the Southwest area and I enjoy reading it from cover to cover each month.
Thank you very much for making this change for me.

Sincerely,
FRANK R. STUBBS, Vice President
Allison Engineering
Albuquerque, New Mexico

Please change my address in Salt Lake City, Utah, to 812 West 8th Street, Los Angeles, California 90017.
Love the magazine!
Still hope to retain my registration in Utah, Nevada and Arizona. Hope you'll still send the book.
Lewis A. Redgate, A.I.A.
(Yes, sir, this will be arranged. Thank you for sending us your new address complete with zip code. This is of much help in keeping the Symposia mailing list up to the minute.)

Dear Mrs. Trunk:
I wish to let you know how much I have enjoyed Symposia. The publication is both interesting and attractive. I have just finished reading your May issue, including the stories on Skyline project, the Landmark Preservation Commission and the comment on Mrs. Helen Arndt . . . all excellent.
Perhaps some time I could meet with you or some of your staff to discuss planning activities in Denver. It is apparent that you all have a vital concern in this subject, and I appreciate this.
Congratulations on your excellent work.

Sincerely yours,
JAMES D. BRAMAN, JR.,
Director of Planning
City and County of Denver



NOTE: Many of our readers tell us they are using the "Memo" as a day-to-day reminder of where to be—and when to be there. We are endeavoring, of course, to make this a **complete** calendar—only possible if we have the cooperation of all the construction-oriented organizations. If your meeting dates are not now included please call us at 422-4153—or if you are outside the Denver Metropolitan Area—mail your meeting schedule to Editor—Symposia—Boyce Publications, Inc., 4070 Estes, Wheat Ridge, Colorado 80033.

JUNE 5: Producer's Council (Denver Chapter) Review of Chapter Programs; Election of Officers. 12:00 noon, Hyatt House, 18th and Grant. (Free Parking.)

JUNE 5: A.I.A./Central Arizona Chapter—Executive Committee Meeting. 4:00 p.m.—ABC Club, Phoenix, Arizona.

JUNE 6: Consulting Engineers Council/Colorado—Director's Meeting. Cocktails, 6:00—Dinner, 6:30 p.m., International House, Denver. (Note: All members are invited and urged to attend Board Meetings. For reservations: telephone 244-4714 before noon of the previous day.)

JUNE 7: Association of Remodeling Contractors/Board of Directors Dinner, 6:30 p.m., Four Winds Motor Hotel, 4600 West Colfax Avenue, Denver.

JUNE 7: WICS/Denver Chapter—Executive Board Meeting. 7:30 p.m. at the home of Mary Lou Pavelka.

JUNE 8: A.I.A./Central Arizona Chapter—Regular Dinner Meeting. Cocktails, 6:00—Dinner, 7:00—Meeting at 8:00 p.m. ABC Club, Phoenix.

JUNE 21: Construction Specifications Institute/Albuquerque Chapter Social Hour, 5:30—Dinner, 6:30—Meeting, 7:30 p.m., Polynesian Inn, 2420 San Mateo N. E., Albuquerque, New Mexico (members of neighboring chapters visiting Albuquerque on this date are cordially invited to attend).

JUNE 21: WICS/Denver Chapter—Regular Dinner Meeting. Social Hour, 6:00—Dinner, 7:00 p.m.

JUNE 24: Construction Specifications Institute/Denver Chapter. Annual "fun and games" night. By invitation.

JUNE 26: Associated Building Contractors of Colorado, Inc. (AGC) Executive Committee Luncheon Meeting. 12:00 noon at the Engineers Club, 1380 South Santa Fe Drive, Denver.

JUNE 27: Consulting Engineers Council/Colorado. General Membership Meeting, 5:30—Cocktails, 6:30, Dinner. Denver Press Club.

JUNE 29: Board of Governors/Mountain States Bureau for Lathing and Plastering, 10:00 a.m., new headquarters, 221 Santa Fe Dr.

RENDERINGS

Our only requirement for publication will be that the rendering must be of a structure on which you have completed a firm contract for construction. The Editorial Staff will need, in addition to the rendering, your name, the name of the owner, and that of the General Contractor. You may telephone the Symposia office at 422-4153, and we will arrange to call for this material at your offices. If you are outside the Metropolitan Denver area, you may address us: SYMPOSIA—Boyce Publications, Inc.—4070 Estes Street—Wheat Ridge, Colorado 80033.

Index to Advertising

New Mexico, Utah, Arizona, Nevada
Please remove Kaibab Lumber Insert for your Product Files.

INNOVATION VS. EXPERIENCE

George Santayana once said, "He who does not read history is condemned to relive it."

The great philosopher was of course talking in broad terms. But his trenchant observation seems applicable to the history of technology, and in particular to the history of heating.

From the earliest heating devices contrived by man's genius to the most advanced high-pressure, high-temperature hydronic system, there have been many innovations. Among them are the Roman hypocaust, the Ben Franklin stove, and the earliest known boiler-generated steam heating system, the latter an English invention of the early 1800's.

These are remembered well because in their time they were practical in more ways than they were impractical.

But what of the many innovations in the history of heating that were not successful? They are either remembered unhappily, or not at all.

What does this have to do with a reading of history? Simply that—in our field, at least—history tells us that the soundest innovations are those based on long experience.

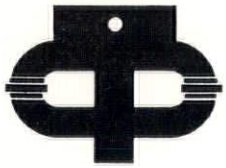
As an example, the modern hydronic system is itself an innovation, but one based on experience dating back to the English boiler, and beyond. Its development is consistent with the policy of tempering innovation with experience. We find this policy helps to avoid a great many headaches.

That's why we suggest that when considering innovations in heating, it's simple prudence to get some facts drawn from experience.

As it happens, these facts are now available in a carefully researched booklet on comparative installed and operating costs of hydronic vs. electric resistance heating systems. As you may have noted, the latter is the current innovation in the heating field.

While our new booklet deals with school heating, the principles are generally applicable to other types of structures. If you'd like a copy, just drop us a note on your letterhead.

Since this booklet is history of a sort, it may help you to avoid reliving it.



COLORADO PIPE TRADES INDUSTRY PROGRAM

2727 W. Sixth Avenue at the New Plumbing Showcase **266-1935**

an example of how

IDEALITE

opens up a new era of expression for architects/engineers where soil problems exist

The loose, deep sand at the building site of the new Fort Morgan High School gave very low bearing value to the soil. Therefore, two things had to be done. First, through vibration and compaction, the relative density of the soil was increased. Second, Idealite lightweight concrete was selected as the primary construction material to reduce the weight of the structure.

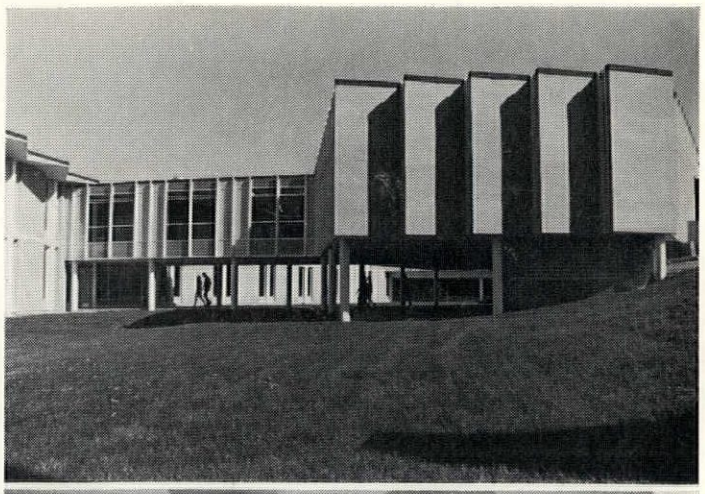
The design utilized four structural systems, all post-tensioned: 1) two-way waffle slab; 2) one-way joists and one-way zee type sections; 3) folded plates; and 4) haunched slabs.

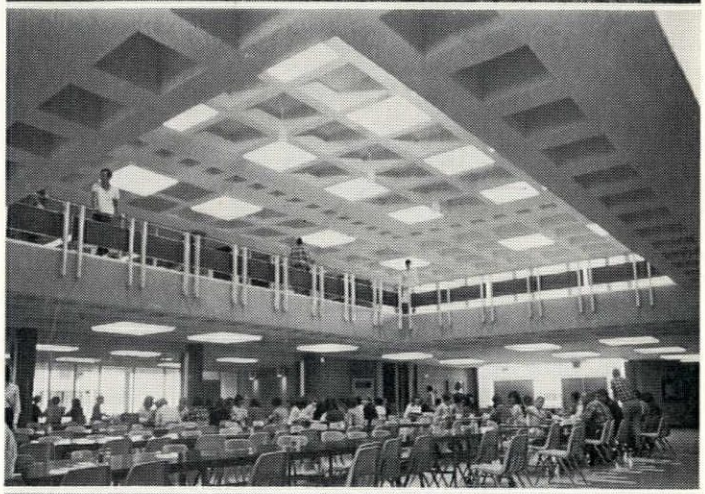
Because of its lighter weight and maximum strength, Idealite permitted the large clear span design. The library is a 65' x 90' clear span area and the auditorium has 90' spans with the balcony supported by two post-tensioned Idealite concrete channel frames to eliminate the need for columns.

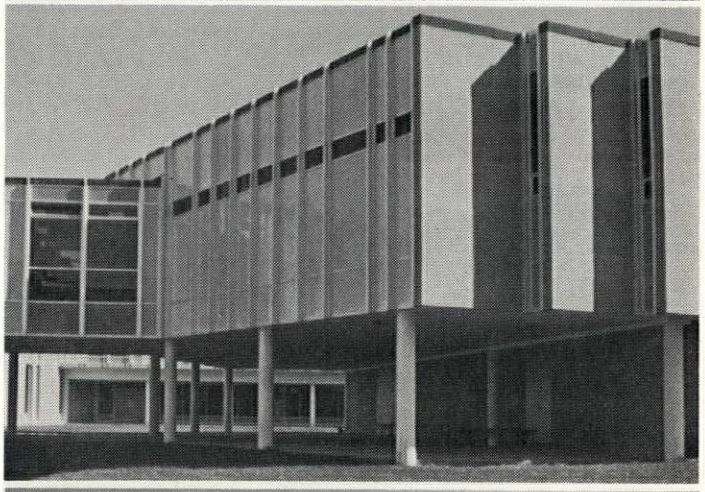
When you are considering the construction of a building, Idealite lightweight concrete offers many advantages – superior insulating properties, low absorption and low shrinkage, up to 30% lighter weight without sacrifice of strength.

Idealite lightweight concrete makes possible buildings that are higher, spans that are wider, designs that are handsomer.

Architect, Wheeler & Lewis; Structural Engineer, Russ Kostroski







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